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WIDE AWAKE



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TALES OF THE PATHFINDERS.

BY ARTHUR GILMAN.

I.

THE MYSTERIOUS ISLANDS.

ONCE upon a time there lived in England a young lady whose name was Anne Dorset. She was of an aristocratic family, beautiful, and of engaging manners. It was long before the times of the Earl of Dorset, or I should have believed that she belonged to his proud family. It was during the reign of that great king, Edward the Third, at a time when the people were stirred by romantic thoughts and deeds. You remember that the celebrated Black Prince was son of this King Edward, and that he was a chivalric warrior who went to France with his father's soldiers and fought at the battles of Cressy and Poitiers, and wrought those deeds of valor that have made him ever remembered for noble heart and valiant achievements. It was in the days of tournaments and jousts, when pageantry was the delight of maidens, and of men of war no less.

There also lived in England, at this stirring time, a young man named Robert Macham, who in some way became acquainted with fair Anne and naturally fell in love with her. Men in high station seem to have had but two occupations in those gay days; going to the wars when there were wars, and paying delicate attentions to fair women in days of peace. As there happened to be war somewhere most of the time, there was generally enough fighting to be done. It happened that Robert, though deserving Anne's love which she gave him with all her heart, was not of a high and aristocratic family, and her friends determined that the two should never marry.

They arrested poor Robert, and put him in prison, whence he escaped, and not willing to give up his fair Anne without another effort, followed her to Bristol, whither she had been carried, and there managed to gain opportunities to see her. He found that she remained true to her promise, and she gladly entered into a fatal plan to flee to France.

When all was ready, Anne took her horse and a trusty groom, and went out one day for an airing, so she declared. In those days, all was considered fair and right in such a cause. Once at a safe distance from the house, she galloped her palfrey until she reached a spot on the Bristol Channel where Robert was anxiously waiting with a boat. The sails were already unfurled, and but a moment was required to weigh anchor and put to sea. The happy runaways sailed gayly down the coast of Cornwall, —

“All down the thundering shores of Bude and Bos,”

trusting to the seamen to steer them towards fair France. Alas, little did they dream that the wind that so softly swelled their sails was to turn to fierce storm, which should drive them far from the gay shores they thought so near, and on which they hoped for a life of so much happiness.

The morning of that stormy night found them drifting away to unknown regions. They were out in the broad Atlantic, an ocean of which at the time the world knew nothing! There was a tradition, of which it is possible they had heard, that there existed in this ocean a fair land of such charms that nothing except Paradise could be compared with it. This happy country was called Atlantis, and as the stories about it are older than any accounts of explorations of the ocean, we may suppose that the sea was named from the land. It is said that the great Athenian law-giver, Solon, who lived some twenty-five hundred years ago, went to Egypt and heard from the wise priests there about the island of Atlantis, which, they said, had been swallowed up nine thousand years before their day in the waters of the great Western ocean. Plato gave a description of it to the Greeks, as he had heard it spoken of by Solon. It was the domain of Poseidon, or Neptune, who had a magnificent palace in the centre of it. There were lofty mountains, noble rivers, rich jewels, beautiful birds and useful animals. The climate was temperate, and the people were all happy until they lost their high

character and fell into bad habits. Then it was, as I suppose, (for Plato's narrative, like a continued story in a magazine, stops suddenly at the interesting place,) that they were all drowned, and their island with its loveliness lost forever.

Anne and Robert might, as I have said, have known of this island, but I fear that at the time we are speaking of they had thoughts only for their own sad condition, for the storm that was carrying them off did not grow less severe as hour after hour heavily dragged on. Their sailors knew only the route to France, along the shores and across the Channel, and were as much lost as the runaways, when the wind roared and the fierce waves drove them out of sight of the headlands of England. Day after day the storm beat upon the little vessel. Poor Anne was



LAND AHEAD!

overcome with remorse and fright, and, I doubt not, wished a thousand times that she had never run away from her home.

After two weeks of these terrible frights and fears, the seamen joyfully saw land. Birds flew about the ship, sweet perfumes were wafted from noble forests, and hope rose in the hearts of all the weary shipload. Some went ashore and came back saying the land

was like another Eden, and Robert determined to take his fainting Anne into the lovely place. They found no men, no women; nothing living but gay birds that did not fear them, and animals that had no fierceness. Mountain brooks carried coolness to the valleys, and rippled musically over sparkling pebbles. Here, under a great tree, in a pleasant meadow, Robert made a bower for Anne, and thought that rest would restore her to strength. He left some of his men in the ship to watch it, and then gave himself up to the delights of the scene. Alas, storms came even to that lovely land, and on the third day the sea rose in its power, and the waves swallowed up the little ship, leaving no more marks of it than had been left of the great island of Atlantis, with its beauties and inhabitants, ages before.

Poor Anne! She had been sad before, but now she was fairly overcome, and feeling certain that her most dismal forebodings had come to pass, she died after three days more of painful life, during which she was not able to speak, even to Robert. The tragedy overcame the strong man, and his companions were unable to comfort him. Upbraiding himself, he wasted away and died of a broken heart. The seamen buried them both under the great tree that had shaded their bower, and marked the spot with a cross and an inscription. They then bethought them of a mode of escape. Building a frail boat, they set out for England, but were wrecked on the coast of Africa, where the Moors made slaves of them. They had discovered the island of Madeira, so it is said, but only misery had come of their adventure. Thus the first land in the great ocean had been found, and thus the story of exploration in the West began.

There is something very interesting about the constant looking to the westward that we notice in history as we study it. We read first of men in the interior of Asia, where the people lived from whom our very language came. They sent colonies into Europe, and for a while history centred about the Mediterranean, and especially about the part of it called the *Ægean sea*. We must not forget Palestine and Egypt, however, where there was civilization before that of Greece and Rome came up. For ages all adventure was confined to this sea, and no one thought it possible for ships to sail beyond the Straits of Gibraltar, which were called the Pillars of Hercules, and *Ultima Thule*, or the Utmost Bound.

Men had travelled too far to the East, and had returned with wondrous stories of the wealth and grandeur of China, which they called the land of the Grand Cham. At the very time when the Black Prince was fighting at Poitiers, an Englishman named Mandeville was travelling in the East, and learning facts that made him assert that the world was a globe, and that one might sail in a vessel all the way around it. Three hundred years before the birth of Christ, a wise astronomer in Egypt, which was the learned land in that age, after careful study, had made up his mind that the world was round, but for ages only the

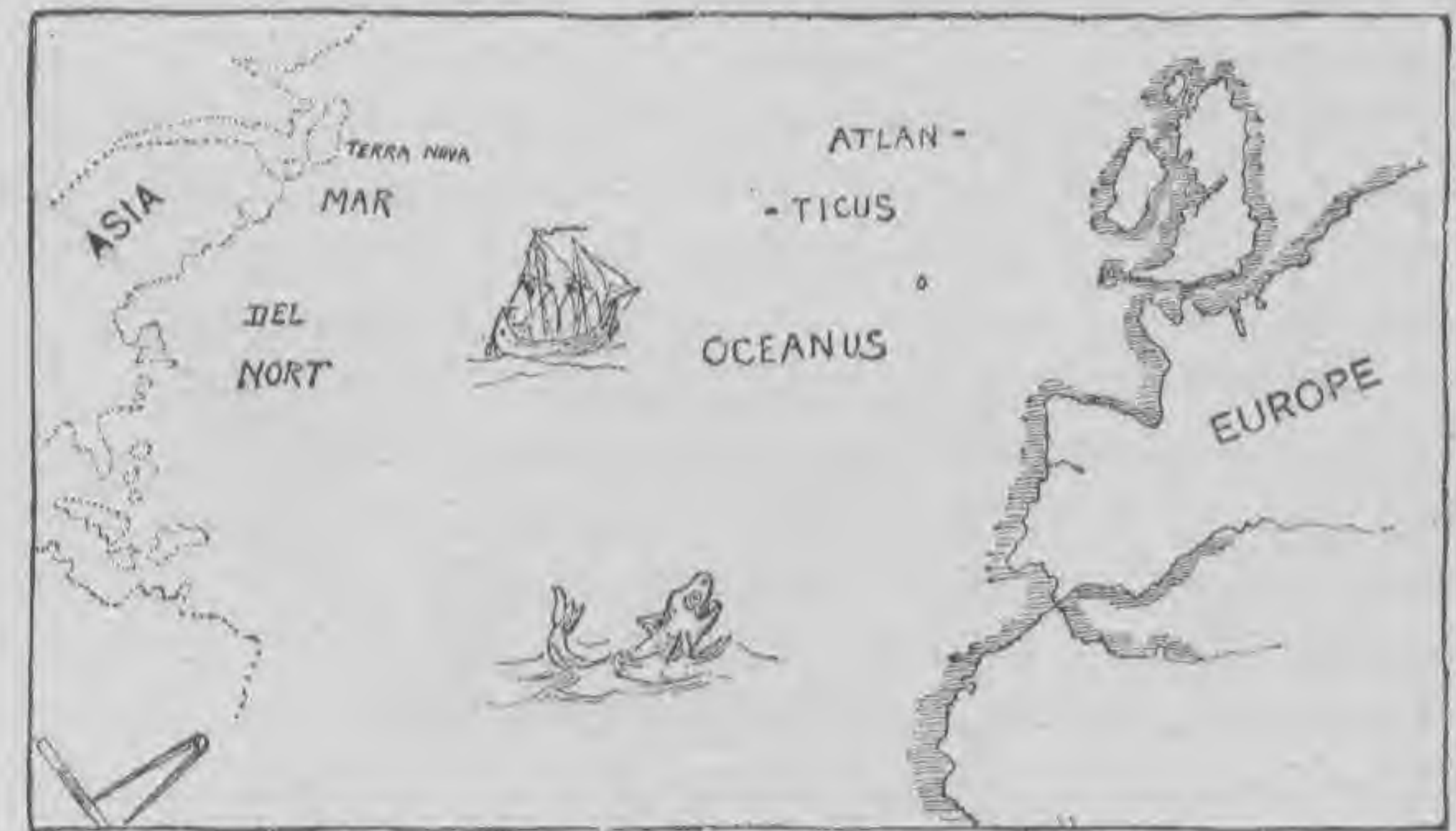
wisest men believed him. They thought that it could not be; that men could not possibly stand on both sides of a round ball, even if it was as big as the earth. I suppose there was not a book in the world, at the time of Robert and Anne, so popular as the book of travels written by Sir John Mandeville on his return from his journeys. He was gone from England more than thirty years, and when he came home, he told wonderful stories, of trees that bore meal, honey and wine, of a lake that was made of the tears of Adam and Eve, who, he said, wept a hundred years after they left Paradise; of the court of the Grand Cham, and its magnificence; of his wives, each of whom wore on her head a sort of cap made to imitate the foot of a man, to show that they were under the subjection of man; and of many other wonders that I cannot stop to tell.

A hundred years before the time of Mandeville, there went from Venice a man named Marco Polo, who also came back with stories of the wealth and wonders of the East. He described a strange island that he called Cipango, which lay to the eastward of China, and he described also, like Mandeville, the palace of the Grand Cham, which he said was in a city that has since been discovered to be Pekin, in the province of Cathay. It was four miles in circuit, he said, was resplendent with gold, silver, precious stones, and gorgeous silks. The air was filled with rich Eastern perfumes, the tables were burdened with wonderful dishes, and the attendants were adorned in the gayest dresses. The capital of the Grand Cham was one hundred miles in circuit, built, like Venice, on islands, and had magnificent bridges, so lofty that the greatest vessels could go under them with no difficulty.

The greatest wonder that Marco Polo described was the island of Cipango, which he said lay in the ocean, at a distance of fifteen hundred miles from China. Of course this island abounded in gold, pearls and precious stones. The palace was covered with plates of gold, as in our land buildings are protected with copper or lead; the halls and windows were plated also with this precious metal, which was often laid on as thick as two fingers. Besides all this, there were charmed stones there, which rendered the bearers invulnerable, and though the Grand Cham had often tried to conquer them, he had, on account of the protection afforded by these stones, never succeeded. This island is now supposed to be Japan, though the wonderful stories told of it by Marco Polo are found to be untrue, just as the stories of Mandeville have been disproved. Still, the books of Marco Polo and Mandeville are interesting to me now, and they stirred up the people of their days, and the lands they described became very real to their readers.

All Europe had been boiling with the excitement of travel for centuries, as wave after wave of the surges of the Crusades swept through the countries from the West to the East and back again. Palmers and pilgrims went from the loveliest villages to the wonder-

ful land over whose fields and hills our Saviour had walked. Their minds had been stirred by the preachers of the Crusades, and they were eager to learn everything new and strange. They suffered every hardship in their vain effort to win the holy sepulchre from the infidels, and they returned home with all the stories of their tramps by land, their long voyages by sea, and the terrible sieges and battles in which they had been engaged with men of whom they could not speak harshly enough. This stirred up the love of adventure that had been kept alive all the



FROM AN OLD MAP.

Dark Ages by one means and another, and every man and every boy who heard of them wished that he himself could find some land of gold and wonders.

If you look on some of the old maps, one of those of the time of Columbus, for instance, you will see an island named after a holy man who lived about a thousand years before, who was known as Saint Brandon. This holy man, who is said to have been the patriarch of three thousand monks, probably was a wise man—at least he must have been of considerable influence. He had heard of the islands in the Western Ocean possessing the delights of Paradise, if they were not the actual Paradise of our first parents. He was told that these blessed places were, as the Holy Land was afterwards, in the possession of infidels, and he felt it his duty to find them and give them the true religion. With a disciple, Saint Malo, he set sail for the unknown West, and, after long wandering, landed on an island that ever after bore his name, though, unfortunately, no one has been able to find it again! What became of them no one knows, probably, I suppose, because a Latin manuscript that recorded their adventures, which once was preserved in a cathedral on one of the Canary Islands, has disappeared.

So strong an impression did the story of Saint Brandon make upon the inhabitants of the Canary Islands, that many persons there have fancied that they have actually seen the island he visited, lying at a distance of some one hundred miles to the westward. For years, and even for centuries, this belief held possession of the people of Europe, and over and over again expeditions were sent out to find it.

The last one sailed from the Island of Teneriffe, in October, 1721, but returned only to tell the expectant populace that it had been unsuccessful. It was not until a number of years later, however, that the island was finally taken off from the map, and I believe that there are those in the Canaries still, who occasionally see, or think they see, the lofty mountains rising from the restless waves of the Atlantic Ocean.

There were two more mysterious islands placed by romance and tradition in the wondrous Western Ocean. The story of one takes us back to the early history of Spain. For eight hundred years that interesting country was stirred by struggles between the Christian inhabitants and certain invaders from Africa, called Moors. These invaders were Mohammedans, and drove out the Christians who lived there. In every direction the poor creatures fled for their lives, for the Moors were ruthless. Among them were seven bishops and a great number of their followers, who managed to obtain ships in which to escape. They knew not where to steer the vessels, and ended by allowing them to drift about in the wide and, to them, mysterious Atlantic. Like the misguided Anne and Robert, they were driven hither and thither day after day until they landed upon another island. There the bishops burned the ships, and built seven cities for the people to live in. We know no more of their history, though seamen sometimes came into port from the West, and said they had seen the island of the Seven Cities. It was reported that the people were civilized, and lived in houses of considerable size and even of magnificence.

At the time of Columbus, there was in Portugal a son of the king of that country, known as Prince Henry the Navigator, on account of the interest he had taken in discovery. To him there came one day some seamen who told a marvellous tale of an actual visit to the island, which was then called Antilla. They thought that the Prince would reward them for the news, but he found fault with them because they had not remained long enough to gain more particular information. They said that they had found that the islanders spoke Spanish, were of the true faith, and anxious to know if the Moors were still rulers of Spain. The sailors said, also, that they gathered sand on the shore and found that it was half gold, and that they would have remained a long time there, had they not feared that they would be kept longer than they wished to stay. This island seems to have no better basis for its existence than the island of Saint Brandon, but this fact made no difference in the faith that was placed in it, nor in the interest with which it was searched for.

The last of our Mysterious Islands seems to have the least real basis of all. For some reasons, it is the most interesting. It is the Island of Bimini, where the Fountain of Youth is found, as the stories tell. Mr. Butterworth introduces it thus :

There came to De Leon, the sailor,
Some Indian sages, who told
Of a region so bright that the waters
Were sprinkled with islands of gold.
And they added, "The leafy Bimini,
A fair land of grottoes and bowers,
Is there; and a wonderful fountain
Upsprings from its gardens of flowers.
That fountain gives life to the dying,
And youth to the aged restores;
They flourish in beauty eternal,
Who but set their foot on its shores!"

This was the Fountain of Youth, for which so many romantic explorers searched long years after the New World had been found by Columbus. Juan Ponce de Leon fully believed that he should discover this fair island and make his name as distinguished as that of the first discoverer. Some old Indians told him that it was one of the Bahama group, and he thought how grand it would be if he could only plunge his old body into the fountain and come forth young again! It was a day of wonders. We can scarcely realize the feelings of people at that time as their eyes were opening to the new Western world, and every returning explorer told a story more wonderful than the one who had been before him. Truth was equal to the tales of romance, and romance was no whit more wonderful than truth. Peter Martyr wrote to the Pope Leo X. of this spring, that it was of "such marvellous virtue, that the water thereof being drunk, perhaps with some diet, maketh old men young again." This he said on the authority of those who had "searched the same," though I fear he had not seen any who had actually drunk the water. He asked the Pope not to think this a rash rumor, for he said many who were noted for wisdom thought it true, and added that he did not attribute the power to nature, but believed that God had reserved it to himself, and exercised it as he did his other powers.

On the third of March, 1512, Juan sailed to find the Island of Bimini. He found the Bahamas, landed on the Island of San Salvador, where Columbus had first stepped on the Western shores, and inquired vainly for the Island of Bimini and the Fountain of Youth. He found neither, and off he sailed again. On a March Sunday, he thought he saw the island. Auspicious omen! it was Palm Sunday! The sea was so rough that for several days he could not land. He hovered about, with how much impatience we may imagine, and at last came to anchor. How the trees pleased his eyes, with their gay blossoms and green leaves! And the fields, what gorgeousness of flowers they bore! Day after day he searched for the fountain, but never could he find its refreshing waters. He had not discovered an island, but our continent, and the country he was in has always since borne the name he gave it, Florida. It is a land of oranges and flowers, but it is not the Mysterious Island of Bimini. That is yet to be discovered.

IN CASE OF ACCIDENT.

BY DR. D. A. SARGENT.

I.

A FEW years ago I gave a series of practical talks on Personal Hygiene, emergencies, etc. These talks were for the benefit of the ladies' class at the Sanatory Gymnasium, in Cambridge. In many instances, the information given has been put to service in rendering timely aid, and preventing serious if not fatal results.

My object in giving these talks was to supplement physical training with a little practical information upon self preservation in time of danger, and to teach a few of the simplest methods of meeting the common accidents and emergencies of life.

Scarcely a day passes but some such information and training would be of immense value.

The first requisites in moments of peril to yourself or to others, are coolness, presence of mind, and above all a ready knowledge of what to do, and what not to do.

Many persons of superior intelligence are rendered powerless in time of excitement and of danger for the want of a little self control.

Others are moved to do something, but having very vague notions as to the correct thing to do, are as apt to do the wrong thing as the right, and in this way work harm instead of good.

Let it ever be remembered, that in case of accident and injury, the object is to render immediate service, and in serious cases to keep the person alive until the aid of a doctor can be procured. Any attempt to go beyond this, and to administer drugs or perform operations without a thorough knowledge of medicine and surgery, will be likely to result disastrously. For this reason I am convinced that a few facts well understood, and at ready command, are worth more to the non-professional than more extensive, and to them, impracticable information.

In order to proceed intelligently with any treatment which has to do with the body, it is necessary to know something of its structure and organization.

I purpose, therefore, making the structure and function of different organs and parts of the body, the basis for a brief consideration of some of the injuries and accidents that may interfere with the function of these various parts, and in so doing, impair the health and endanger life.

THE BONY FRAMEWORK.

This is composed of over two hundred separate bones of different sizes and shapes, all united so as

to form one complete whole, which is termed the *skeleton* (fig. 1). The uses of the skeleton are to afford protection for the soft tissues, and vital parts, to furnish a basis for their support, and to supply levers by means of which the body, and its various members, may be moved.

In accordance with this design, the head and trunk

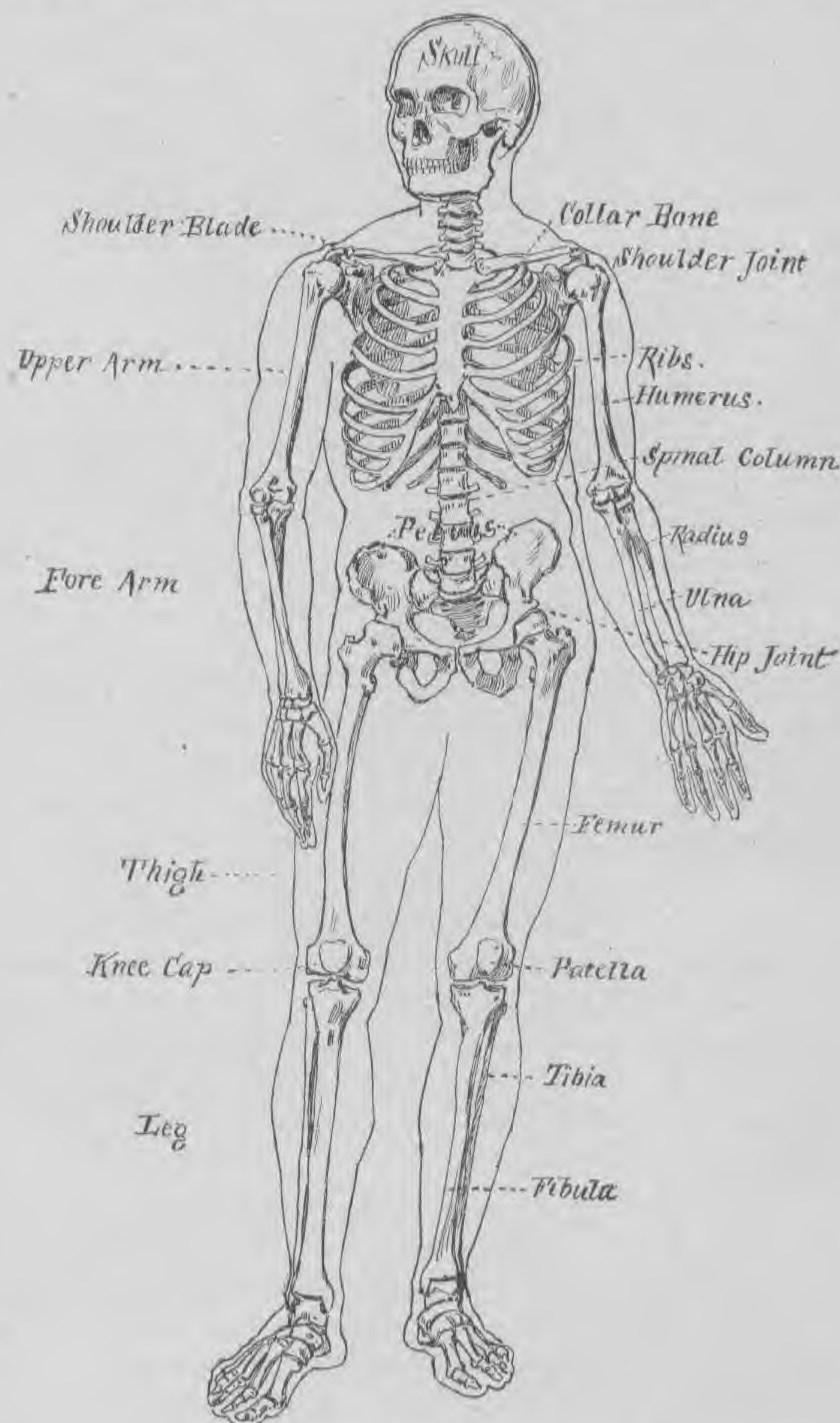


FIG. 1.

are surrounded principally by flat and irregular bones, the base of the skull and pelvis by shelving, bowl-shaped bones, and the arms, legs, fingers and toes by long, slender bones.

All of the bones are constructed so that they will have the greatest amount of strength with the least amount of material. The flat bones are therefore

made of two thin plates of hard substance, with soft spongy material between; the bowl-shaped and irregular bones are constructed after the same design, while the long bones are made cylindrical, with layers of

hard bone on the outside, soft spongy bone within, and a soft substance called marrow in the central cavity.



FIG. 2.

is composed of twenty bones, which are closely united and immovable, with the exception of the lower jaw. The arched construction of the skull affords an admirable protection for the brain, while the irregular bones of the face furnish similar protection and support for the organs of seeing, hearing, smelling and tasting.

THE SPINAL COLUMN

is made up of twenty-four separate bones, called *vertebræ*. Each bone consists of a solid piece of bone termed the body, a more or less oval or disc-shaped piece of bone, and side and back processes for the attachment of muscles. When these bones are united by ligaments, etc., as they are in the body, they form a hollow cylinder or passage-way along the entire length of the column. This passage-way contains the spinal cord, which is a continuation of the brain.

In order to protect the brain and cord from injury, from jumping, falling, etc., and at the same time allow freedom of movement to the spine, there are soft pads or cushions between each vertebra. These serve as buffers, and give to the column as much elasticity as is possible compatible with strength.

THE THORAX OR CHEST.

To the middle and upper portion of the spinal column, twelve pair of thin, curved-shaped bones are attached, termed ribs. Twelve project from one side, and twelve from the other, curving around the body until seven of them unite on each side to the breast bone or sternum, the other five pair becoming attached to one another by means of elastic cartilages. The cavity thus enclosed is termed the thoracic cavity, and it contains those highly important organs, the heart and lungs. They are partly supported at the base by a strong membrane called the diaphragm, which also serves as a partition between the thoracic and abdominal cavities.

THE PELVIS.

At the base of the spinal column is a large, strong, bony cavity called the pelvis. This is composed of two haunch, or hip-bones, and the sacrum or rump-bone. The projecting rims and irregular surface of the pelvis afford firm attachment for the muscles of the back and legs, while the basin-like form of the interior gives admirable support to the intestines, bladder, etc.

The hip bones are supplied with deep sockets, into which the heads of the thigh bones are inserted, and bound by strong ligaments.

THE LIMBS OR EXTREMITIES.

They are divided into two upper and two lower. Each of the upper extremities includes a triangular bone situated at the back of the thorax, called the scapula or shoulder blade, and the clavicle or collar bone, which joins the shoulder blade with the sternum or breast bone. Then comes the humerus or bone of the upper arm proper, which is fitted by a globular head into a socket in the shoulder blade.

To the humerus are attached the two bones of the fore arm, termed the radius and ulna, and to these are added the twenty-seven bones of the hand, comprised in the wrist, hand proper, and fingers.

Each of the lower extremities consists of the femur or thigh bone, the knee cap, the two bones of the leg, called the tibia and fibula, and the twenty-six bones of the foot, seven in the heel and instep, five in the middle of the foot and ankle, and fourteen in the toes.

THE JOINTS.

All of the bones are united by joints. Some are fixed and immovable like those of the skull, some are slightly movable like those of the *vertebræ*, and collar bones and breast bone, others are capable of extensive movement as in the arm at the shoulder, thigh at the hip, etc. If the bones moved upon themselves they would grate together harshly, so nature has covered the ends at the joints with smooth cartilages, and provided a sac or membrane filled with synovial fluid for lubricating purposes.

The bones are bound to each other at the joints by ligaments. At the shoulder, the hip, and the knee, these ligaments are so numerous as to almost cover the whole joint, forming a complete capsule.



FIG. 3.

CARE OF THE BONES.

In infancy and childhood the bones are in a plastic condition, and may be twisted and bent with slight

fear of breaking. In early youth and manhood they are less flexible, and with increasing age they become brittle. They are made larger and stronger by exercise, just as the muscles are.

The bones are often protected from injury by the development of the muscles and ligaments which surround them, and hold them in place.

When injury occurs to the bones it is usually in the shape of a fracture or dislocation. This may be occasioned by an accident in which the person concerned is made the helpless victim of circumstances.

But the greatest number of fractures and dislocations is caused by trivial accidents such as falling on the ice, jumping from a carriage, or being thrown from a bicycle or horse.

Many a broken bone, as well as more serious injuries, could be prevented by learning how to jump and how to fall.

As a rule, in case of an accident where you have time to think, do not hold your body and limbs rigidly stiff, or thrust one arm or leg forward to break

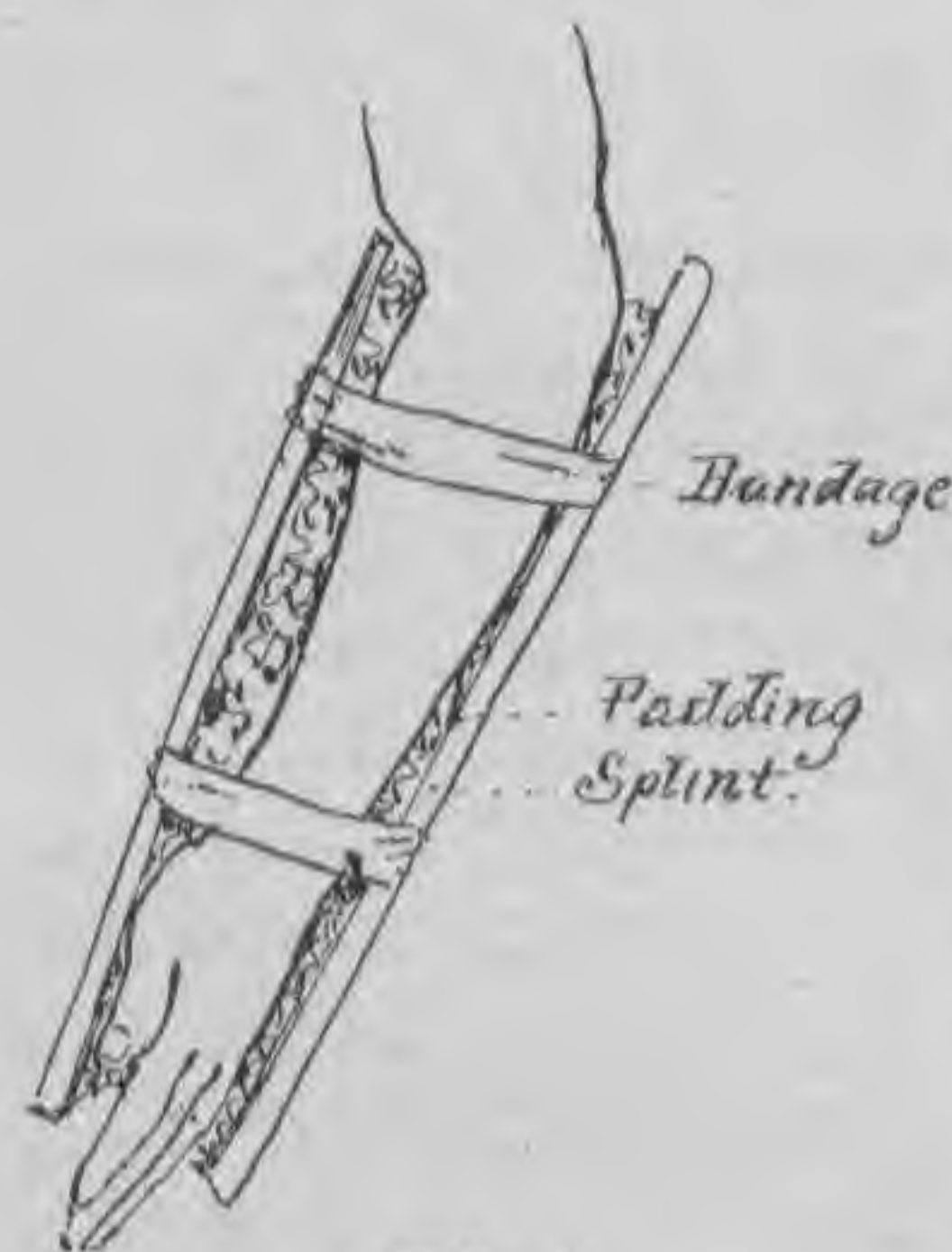


FIG. 4.

the force of your fall. But as soon as you find yourself going, take a full breath, relax all of the muscles, or rather put them under half tension by bending the body and limbs slightly, and land if possible upon your hands and feet. In many cases it is better to roll or tumble instead of attempting to jump. Under such circumstances flex your limbs, and put yourself as near as possible in the shape of a ball. By so doing you will distribute the force of the fall over several parts of the body, and though you may get severely bruised, the chances are that you will be more likely to escape broken bones, and internal injuries. In accidents from blows, from stones, or flying missiles, it is often better to protect the body and more vital parts, even at the expense of a broken arm or leg.

FRACTURES.

In case of an accident, ascertain if possible just what has happened. Whether a bone is broken, can easily be determined: 1st., by the persons not being able to raise the limb; 2d., by its being bent or shortened; and 3d., by severe pain. If an attempt be made to move the limb, it will bend where it ought not, and the broken ends of the bones may be felt grating against each other. Having ascertained the general character of the injury, send at once for a surgeon, first informing the messenger of the nature of the wound, in order that the surgeon may come provided with the necessary appliances.

In the meantime do your best to keep the sufferer as

quiet and comfortable as possible. If a limb be broken, motion or handling of any kind will tend to increase the pain and aggravate the injury. If the person suffering is unusually strong, or nervous and excitable, it will be difficult to keep the limb still. On this account, and because of the involuntary spasm of the muscles, which tend to pull the broken bone out of place, it is well to fasten the limb to some sort of support or splint.

These can be made out of laths, sticks, stiff cardboard, cigar boxes, canes, and in fact most anything that will furnish the necessary support.

In order to make them conform to the shape of the limb, they should be thickly wound with strips of cloth, pieces of old sheets, blankets, clothing, etc. Beneath the splints should be placed a padding of cotton wool, tow, flax, straw, grass, etc., to protect the limb from chafing. The pads should be covered with cloth or flannel. The splints may be fastened to the limb by pocket-handkerchiefs, neck ties, suspenders, strips of cloth, etc. As the special treatment will depend largely upon what bone is broken, let us consider briefly some of those most likely to be injured.

THIGH.

A fracture of the thigh bone will make it impossible for the person to walk or lift his leg. The contraction of the muscles will make the leg shorter, and by pressing the ends of the bones against the soft parts, cause a great deal of pain and much discomfort. If you have any difficulty in securing splints, it is better to make a splint of the uninjured leg by binding the other one firmly to it (*fig. 2*). In this way the sufferer may be kept quite comfortable until the surgeon arrives.

THE LEG.

The leg, you will remember, is composed of two bones, the tibia and fibula. The latter is the smaller bone of the two, and usually concealed from the touch by the fleshy muscles of the calf. In fracture of the fibula simply apply a bandage around the leg from the knee down. By so doing the tibia will be made to act as a splint.

In case the tibia is broken, it will easily be discovered by the displacement under the skin on the front of the leg.

Make your splints long enough to reach from the knee to the bottom of the foot, then fasten



FIG. 5.

your pads to the splints and bind both to the leg.

THE UPPER ARM.

When the upper arm is broken, get four splints, long enough to reach from the shoulder to the elbow, then fasten the padding to each, and place one in front of the arm, the longest one behind, and one on each side. Secure these with a bandage, and put the forearm in a sling supported from the neck (*fig. 3*).

THE FOREARM.

In fractures of the forearm, one or both bones may be broken. The treatment, however, is the same. Prepare two splints that will extend from the elbow to the tips of the fingers. Place one on the palm side of the hand, having the upper end at the bend of the arm, and the other on the back of the hand, with the end of the elbow. Fasten the splints in this position with a bandage (*fig. 4*), place the arm across the body, with the palm inward, and support it from the neck with a large handkerchief or pair of suspenders (*fig. 3*).

THE COLLAR BONE.

When there is a break here, it may readily be detected by comparing the injured bone with the one on the other side. An unusual projection, with a drooping of the shoulder forward, and pain in that region, are indicative of a fracture. Secure a bundle of papers, a billet of wood, or something of the sort, about six inches long, and two or three thick. Take a coat sleeve or a towel and roll around this bundle until you have made a pad about four inches thick. Put this under the arm next to the injured bone, and bind the arm to the side by passing a bandage around the body (*fig. 5*). By pushing the shoulder back, and manipulating the broken bone, it may be put into place before the doctor arrives. But this is work that better be left to his skill and judgment.

THE RIBS.

If one or more ribs be fractured, it will be made evident by a pain in the affected side when taking a full breath or upon pressure. If there is a fair prospect of having medical attendance soon, and there is no spitting of blood, or bleeding externally, the best thing to do is simply to overlap the undercoat as much as possible, and pin it tight around the body. If you are compelled to wait some time for the doctor, let the person lie on the effected side so as to lessen the action of the ribs in breathing.

DISLOCATIONS.

Where the bones are thrown out of joint, as often happens with the fingers, they may easily be pulled back into place. And this may often be done in case of dislocation at the shoulder, but as a general rule if the accident has been a severe one, there is danger of complication with a fracture, and under these circumstances, unskilled pulling and tugging at the limb might make the injury irreparable.

Dislocations and injuries at the joints might better be treated by the non-professional as the fractured bones of which they form a part, *except that the limb is usually kept straight.*

Injuries to the hands and feet can best be treated with cold water applications, and bound with wet cloths.

If possible, elevate the injured member so as to relieve it from the pain occasioned by the blood pressure when it is hanging down. Further care of the broken bone might better be left in the hands of a skilled surgeon, for the process of healing begins at once, and if the bone be well set, it will be as good as new in from three to six weeks. But if the ends of the bones are not properly joined, or if the limb is not kept quiet, nature will continue her reparative work just the same, but the result will be a crooked or shortened limb, necessitating the re-breaking and re-setting of the bone, or the carrying of a deformity for a life-time.

WAYS TO DO THINGS.

BY MARGARET LAKE.

XVI.

HOW TO MAKE A FERNERY.

NOW is the time to be getting ready for your fernery—all you who are off in the country (or who live there), or are just getting back from

your summer vacation, with a big parcel of ferns and things which you collected at the White Mountains, or among the Green Mountains, or the Berkshire Hills, or at Mount Desert, or in some woods, or by some pond, or by the sea, or somewhere, no matter where—lovely things were around you wherever you went.

I know what you have been doing: for, have I not seen in my summer trips for these twenty years, how you young people do; how it seems as if you wanted to carry all the woods home with you; how, hot and tired, but happy, you have been seen coming back to the farmhouse or hotel where you boarded, with your arms full; how you put your treasures safely away in the coolest, shadiest corner of the back piazza, and asked anxiously if they would keep till you could get them home? And when the morning of packing up came, what a stir to get them all into the smallest possible compass; for were not the older folks of the party all complaining because the boys had cut so many canes, and the æsthetic grown-up daughters had such bundles of cat-tails and sun-flowers, so that the "baggage" was already beyond all bounds of reason?

If it should happen that you have not secured what you would like to stock your fernery with, you can do it now: and if anybody should tell you that those frail-looking things will not stand the journey home, you can answer, on my authority, that they are mistaken. Just get the roots, and you are all right. I have not much doubt that there are ferns growing in a Western city to-day from some dry-looking roots which a lady from New England took out with her, and after being a week on her journey, distributed among her friends, so that the ferneries all about the city were beautiful with them by Christmas time.

There is a good deal of vitality in roots: their hold on life is something wonderful. Plant them, and you will hear from them, as Doctor Franklin did from a seed or two he found in a piece of broom corn, to which, I suppose, all the brooms in the United States may be traced.

Therefore, collect, and have patience. The way is to tear up a whole mass of the greenery from some moist knoll or hummock, moss and all. It will be sure to be full of things, gold-thread, bunch-berry, partridge-berry, mitre-wort and dew-berry; and every one of them will blossom in a fernery in winter. No knowing what will come up out of the moss. Get also from the woods the two-leaved Solomon's seal — you will know it by the bunch of finely speckled berries; the Indian cucumber root, the rattlesnake plantain, lady's slipper, wake robin, chick-weed, winter-green, princes' pine, pyrola. All these and many others will bloom there, and violets. I might make a long list of flowers, besides nearly all kinds of ferns, and mosses. But it is well to get any and every little delicate woods' plant that you like; roll them up in moss, which will keep them damp enough, and when you get home, fit up your fernery.

But first — in accordance with the principle laid down by the famous Mrs. Glass, in her cook-book, who says about cooking a hare, "first, get your hare," — you will first get your fernery.

Many persons would have one quickly enough but for thinking the expense too great. But it is not at all important that you have one of those nice black

walnut cases with the costly oval or round glass. A home-made one is more convenient, and much cheaper.

This, which the artist has drawn from one in use, is, as you notice, proportioned like a house with a steep roof. The frame is of hard wood — a mere sash to hold the glass (for it is really a glass house), so are the bottom or floor, and the base, which is about four inches deep. A groove is cut in the sash, in which the glass is set firmly; no putty was used, though I should suggest it as being more secure. All the corners are dovetailed together and made sure by little brads.

The roof is separate, so as to be lifted off; and when on, is kept fast in place by means of two little corks the size of a pipe stem, which are fastened to the pieces of wood at the bottom of the roof, and shut into holes made for them in the strips on which it is set, so that when closed not so much as a crack is to be seen. This is eighteen inches long and fourteen wide, and from base to top is twenty-four inches. The glass sides are about ten by sixteen; the ends ten by twelve; the sides of the roof are ten by sixteen,



A FERNERY.

and the triangular pieces at the ends, ten by ten. One could be more elegantly proportioned if the roof was not so steep. These figures are given as a guide. This is very roomy, especially in height; but that is no disadvantage, because a tall fern can be set in the middle and have space to spread off at will, or some little hooks can be screwed into the ridge-pole (likening it to a house), and tiny hanging things suspended from them.

The glass is of the common window-pane kind, and was about eleven cents a pane; eight panes were required, and the man who had them for sale cut them to fit the sash. The wood was maple, and was hunted out of the odds and ends in the loft of the wood-house. Any thoroughly seasoned wood, even pine, is suitable, and the cost is not worth mentioning. The frame should be neatly finished and joined,

should be strong and firm on account of the weight after the earth and plants are in; and before the glass is cut, should be stained, or oiled, or painted, outside and in. A pretty stain is made by stirring a tablespoonful of burnt umber into a cup of vinegar, more or less, according to whether you wish the color to be lighter or darker. Stir vigorously and put it on with a little swab: it will dry in the course of a few hours, and then can be varnished if you like. Five cents' worth of umber is enough to do your fernery, with plenty left for three or four brackets besides.

All the work should be faithfully done, for you want no shrinking or gaping or warping afterwards. You must remember that it is to be subjected to dampness within and dryness without. Once done well, your fernery will last for years, and you can have something beautiful in it from January till January comes again, a perpetual delight to all who see it; and costing so little.

Now, an important part remains—the movable zinc tray, which must just fill the wooden bottom, and be of the same height, but not fit so closely that you cannot take it out when necessary. Ours cost fifty cents, but may be made for less; any tin-man will make it.

There you have the figures. You can proportion one as you like, but this is large enough unless you wish to set little flower pots in; but a larger one would be heavy to move about, and instead of a fernery one would need a Wardian case.

Now, for the fitting up. Last October we removed the roof and the tray and washed the glass, preparatory to having everything fresh and clean for the coming winter. The old contents were emptied, and we began anew. The first thing was to place a layer of broken brick, and small pebbles and gravel, on the bottom of the tray for drainage, perhaps an inch and a half deep, over which we scattered bits of charcoal to keep all pure. We had previously collected a great store of things from the woods with which to stock it, taking up a whole mat of moss with all that therein grew, and everything with a little of the woods' mould on the roots; also we had a clump of pitcher plants from a cranberry meadow, and some rattle-snake plantain. Altogether for our fourteen by eighteen accommodations, I should judge that we had about a wheel-barrow load of material to select from; but we were in the country then.

It is always desirable to use the rich, mellow leaf mould that is found in the woods. You can easily take up your plants with enough of it clinging about them; and it is so loose and light it will not add

materially to the bulk or weight. Not much is needed for the fernery; two or three inches of it only above the bed of drainage, mixed with a little sand. In the cities it can be obtained from greenhouses. Many of the plants would flourish if only moss was put in.

In ours we placed a good layer of such soil; and the first plant we set out was a tall, beautiful fern which reached nearly to the roof, for we wanted it to look pretty all at once without waiting for things to grow. Then a pitcher-plant, purple polygala, creeping snow-berry, lots of partridge-berry, with the scarlet berries on, and nearly all of the wild things I have named. Then we went into the garden and dug up lilies-of-the-valley that we were sure were going to bloom, which is indicated by the bluntness and plumpness of the crown just above ground (the leaves were gone), also roots of pansy and fragrant single violet. These we put into the corners where they would have the most light. We packed the tray full, too full, perhaps, not forgetting roots of maiden-hair fern. We had not much faith in trailing arbutus, though we set out a root or two; our hopes for that sweet flower we based on the clusters of buds we gathered from the woods, and these we put in a small tumbler of water and set among the greenery.

Then we gave our little garden under glass a thorough sprinkling, put the roof on, and set it in the light. Occasionally we raised it and admitted the air for a short time, but it does not answer to do this often. It must be kept covered, watered perhaps once a month, kept in the light and warmth.

The result to us was beyond our highest anticipations. Though the pansies did nothing but grow tall and rank, there was always a violet to give a friend—a delectable violet which made the room fragrant when it was taken out; there were “many flowers” week after week; mitre-wort bloomed, princes' pine, gold-thread, and other little things; and while snow yet lay on the ground, the lilies-of-the-valley blossomed. Greatest success of all, and to our utter amazement, the pitcher-plant flowered, maiden-hair thrived, the great fern spread off till its tips touched the glass, the rattle-snake plantain sent up a spire of bloom, and everything was beautiful.

I have told you now the method, the expense, and how simple a thing it is to fit up a fernery. Another winter we shall put in tulip bulbs and some other garden plants there may be room for. Things will bear packing quite closely if you are careful to keep those that like the shade in the background, and let the others have the best chance for the light. Occasionally the fernery needs turning so the sun can reach all; otherwise it requires but little care.

LITTLE BIOGRAPHIES.—HOW SUCCESS IS WON.

BY SARAH K. BOLTON.

I

PETER COOPER.

ON the seventh of April, 1883, the great city of New York was in mourning. Flags were at half-mast. The bells tolled. Shops were closed, and in the windows the picture of a kind-faced, white-haired man was draped in black. All day long tens of thousands passed by an open coffin in All Souls' Church: Governors and millionaires, poor women with little children in their arms, workmen in their common clothes, and ragged newsboys—all with aching hearts. The great dailies like the *Tribune* and *Herald*, gave six columns to the sad event. Messages of sympathy were cabled from England.

Who was this man whom the world mourned on this April day?

Was he a President? Oh, no. A great general? Far from it. One who lived magnificently and had splendid carriages and diamonds? Not at all.

He was simply Peter Cooper, ninety-two years old, the best-loved man in America.

Had he given money? Yes; but other men in our rich country do that. Had he travelled abroad, and so become widely known? No. He would never go to Europe, because he wished to use his money in a different way.

Why, then, was he loved by a whole nation? for even the Turks, Parsees and Hindoos talked about him. A New York journalist gives this truthful answer:

Peter Cooper went through his long life as gentle as a sweet woman, as kind as a good mother, and as honest and guileless as a man could live, and remain human.

Some boys would be ashamed to be considered as gentle as a girl. Not so Peter Cooper.

He was born poor, and always was willing that everybody should know it. He despised pride. When his old chaise and horse came down Broadway, every cartman and omnibus driver turned aside for him. Though a millionaire, he was their friend and brother, and they were personally proud and fond of him. He gave away more than he kept. He found places for the poor to work if possible, gave money if they were worthy, and though one of the busiest men in America, always took time to be kind.

His sunny face was known everywhere. His pastor, Rev. Robert Collyer, said this of him:

His presence, wherever he went, lay like a bar of sunshine across a dark and troubled day, so that I have seen it light up

some thousands of care-worn faces as if they were saying who looked on him, 'It cannot be so bad a world as we thought, since Peter Cooper lives in it and gives us his benediction.'

And how did this poor boy come to his success and his honor?

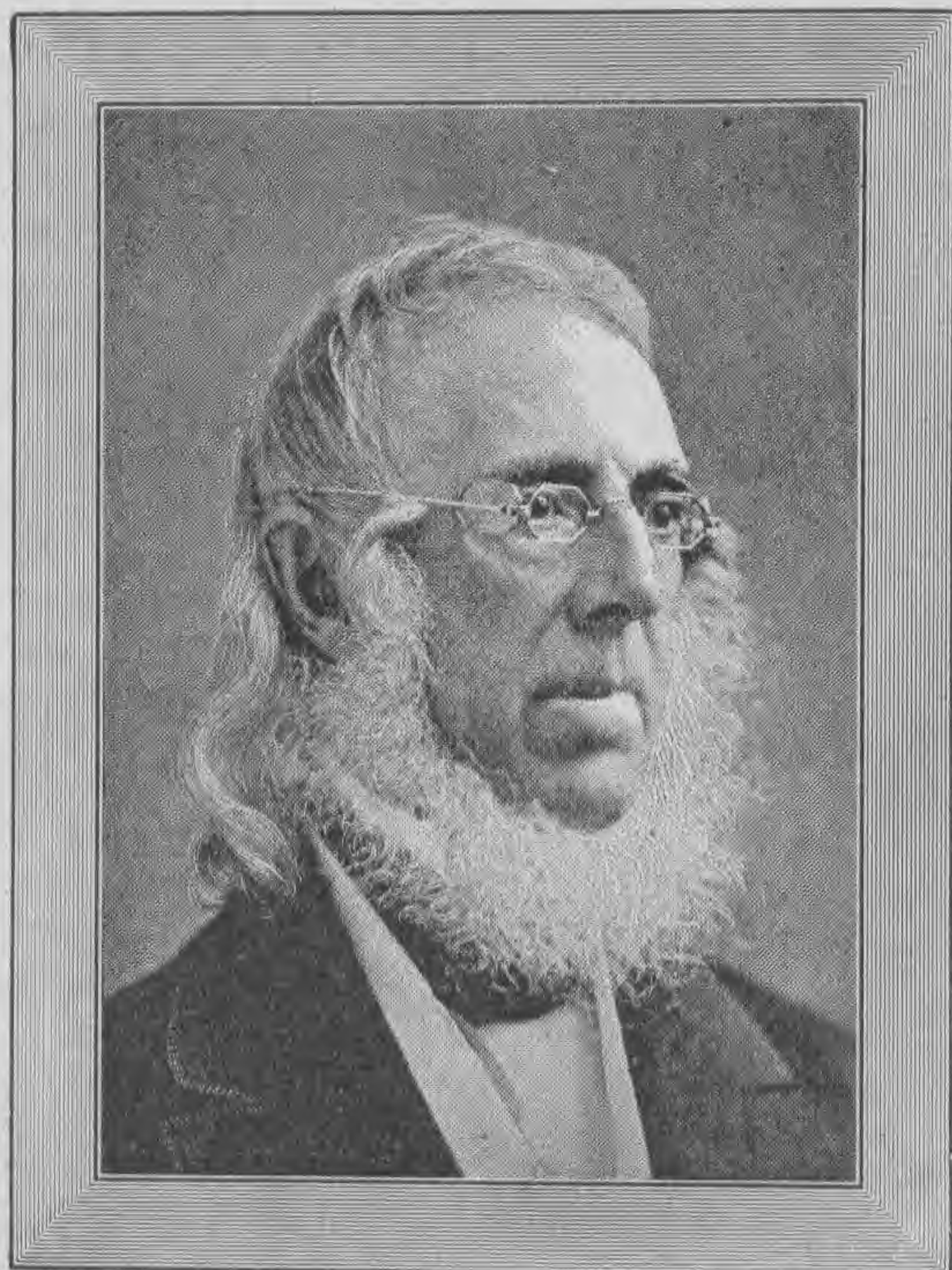
By his own will and perseverance. Nobody could have more obstacles to overcome. His parents had nine children to support and no money. His father moved from town to town, always hoping to do better, forgetting the old adage, that "A rolling stone gathers no moss." When Peter was born, the fifth child, he was named after the Apostle Peter, because his father said: "This boy will come to something." But he proved feeble, unable to go to school save one year in his life, and then only every other day. When he was eight years old, his father being a hatter, he pulled hair from rabbit skins, for hat pulp. Year after year he worked harder than he was able, but he was determined to win. When his eight little brothers and sisters needed shoes, he ripped up an old one, and thus learning how they were made, thereafter provided shoes for the whole family. A boy with this energy would naturally be ambitious. At seventeen, bidding good-by to his anxious mother, he started for New York to make his fortune. He had carefully saved ten dollars of his own earnings; a large sum, it seemed to him. Soon after he arrived, he saw an advertisement of a lottery, where if one bought a ticket, he would probably draw a prize. He thought the matter over carefully. If he made some money, he could help his mother. He purchased a ticket, and drew—a blank! The ten dollars gone, Peter was penniless. Years after, he used to say, "It was the cheapest piece of knowledge I ever bought;" for he never touched games of chance afterward.

Day after day the tall, slender boy walked the streets of New York, asking for work. At last, perseverance conquered, and he found a place in a carriage shop, binding himself as apprentice for five years, for his board and two dollars a month. He could buy no good clothes. He had no money for cigars, or pleasures of any kind. He helped to build carriages for rich men's sons to ride in, but there were no rides for him. It is an old saying, that "Everybody has to walk at one end of life," and they are fortunate who walk at the beginning and ride at the close.

When his work was over for the day, his shop-mates ridiculed him because he would not go to the taverns for a jovial time; but he preferred to read. Making a little money by extra work, he hired a teacher, to whom he recited evenings. He was tired, of course,

but he never complained, and made many friends because he was always good-natured. He used to say to himself, "If I ever get rich, I will build a place where the poor boys and girls of New York may have an education free." How absurd it seemed that a boy who earned only fifty cents a week for five years, should ever think of being rich, and establishing reading rooms and public institutions. Yet the very kind and quality of his dreams was an earnest of future success and greatness.

When Peter became of age, Mr. Woodward, who owned the carriage factory, called him into his office. "You have been very faithful," he said, "and I will set you up in a carriage manufactory of your own;



PETER COOPER.

you could pay me back for the money borrowed in a few years."

Peter was astonished. This was a remarkable offer to a poor young man, but he had made a solemn resolution never to go in debt, and he declined it, though with gratitude. Mr. Woodward was now as greatly astonished as Peter had been, but he respected his good judgment in the matter.

The young mechanic now found a situation in a woollen mill at Hempstead, Long Island, at nine dollars a week. Here he invented a shearing machine, which proved so valuable that he made five hundred dollars in two years. With so much money as this, he could not rest until he had visited his mother. He found his parents overwhelmed in trouble on

account of their debts, gave them the entire five hundred dollars, and promised to meet the other notes his father had given as they became due. His father had made no mistake, evidently, in naming him after the Apostle Peter.

Meantime the young man had fallen in love, not with a foolish girl who cared only for dress, and her own pretty face, but with one who had a fine mind and lovely disposition. Sarah Bedell was worthy of him. After fifty-six years of married life, she died on the anniversary of her wedding day. Her husband said, "She was the day-star, the solace and the inspiration of my life." When their first baby was born, he invented a self-rocking cradle for it, with a fan attached, to keep off the flies, and a musical instrument to soothe the child to sleep.

He now moved to New York and opened a grocery store. An old friend advised him to buy a glue factory which, having been mismanaged, was for sale. He knew nothing of the business, but he had faith in himself that he could learn it, and he soon made not only the best glue, but the cheapest in the country. For thirty years he carried on this business almost alone, with no salesman, and no bookkeeper. He rose every morning at daylight, kindled his factory fires, worked all the forenoons making glue, and afternoons selling it, keeping his accounts, writing his letters and reading in the evenings, with his wife and children. He continued to work thus when his income had reached thirty thousand dollars a year, not because he was over economical, but that he might some day carry out the purpose of his life, to build his free school for the poor. He had no time for parties or pleasures, but when the people of New York, because he was both honest and intelligent, urged him to be one of the City Council, and President of the Board of Education, he dared not refuse if he could help his own city. How different such a life from that of a man, who, enjoying all the advantages of a government, does not even take time to vote.

Mr. Cooper's business prospered. Once when his glue factory burned, with a loss of forty thousand dollars, before nine o'clock the next morning, lumber was on the ground for a new building, three times the size of the former. He now built a rolling mill and furnace in Baltimore. At that time, only thirteen miles of the Baltimore and Ohio railroad had been completed, and the directors were about to give up the work, discouraged, because they thought no engine could make the sharp turns in the track. Mr. Cooper needed the road in connection with his rolling mill; nothing could discourage him. He immediately went to work to make the first locomotive ever constructed in America, attached a box car to it, invited the directors to get in, took the place of engineer himself, and away they flew over the thirteen miles in an hour. The directors took courage, and the road was soon finished. Years after, when Mr. Cooper had become famous, and the hospitality of the city of Baltimore was offered him, the old engine

was brought out to the delight of the assembled thousands.

Mr. Cooper soon erected at Trenton, N. J., the largest rolling mill in the United States, a large blast furnace in Pennsylvania, and steel and wire works in various parts of the State. He bought the Andover iron mines, and built eight miles of railroad in a rough country, over which he carried forty thousand tons a year. The poor boy who once earned only twenty-five dollars yearly, had become a millionaire! No good luck accomplished this. Hard work, living within his means, saving his time, not squandering it as some men do, talking with every person they meet, common sense, which led him to look carefully before he invested money, promptness, and the sacred keeping of his word, these were the characteristics which made him successful.

Mr. Cooper was honorable in every business transaction. Once he said to Mr. Edward Lester, a friend who had an interest in the Trenton works, "I do not feel quite easy about the amount we are making. Working under one of our patents, we have a monopoly which seems to me something wrong. Everybody has to come to us for it, and we are making money too fast: it is not right." The price was immediately reduced. A rare man indeed was Peter Cooper, to lower the price simply because the world greatly needed the article he had to sell!

He was now sixty-four. For forty years he had worked day and night to earn money to build his Free College. He had bought the ground between Third and Fourth avenues, and Seventh and Eighth streets, some time previously, and now for five whole years he watched the great, six-story, brown-stone building as it grew under his hands. The once penniless lad was building into these stones for all future generations, the lessons of his industry, economy, perseverance, and noble heart. In a box in the corner stone he placed these words:

The great object that I desire to accomplish by the erection of this Institution is to open the avenues of scientific knowledge to the youth of our city and country, and so unfold the volume of Nature, that the young may see the beauties of creation, enjoy its blessings, and learn to love the Author from whom cometh every good and perfect gift.

But would the poor young men and women of New York, who worked hard all day, care for education? Some said no. But Mr. Cooper looking back to his boyhood and young manhood believed that the people loved books, and would use an opportunity to study them.

And when the grand building was opened, with its library, class-rooms, hall, and art rooms, students crowded in from the shops and the factories. Some were worn and tired, as Peter Cooper was in his youth, but they studied eagerly despite their weariness. Every Saturday night two thousand came together in the great hall to hear lectures from the most famous people in the country. Every year nearly five hundred thousand read in the Library and Free Read-

ing Room. Four thousand pupils came to the night-schools to study science and art.

For twenty-four years this labor of love has been carried on. The white-haired, kind-faced man went daily to see the students who loved him as a father. His last act was to buy ten type-writers for the girls in the department of telegraphy. Has the work paid? Ask the forty thousand young men and women who have gone out from the institution to earn an honorable support, with not a cent to be paid for their education. No person is accepted who does not expect to earn his living, for Mr. Cooper had no love for weak, idle youth who depend on their parents and on the hope of an inherited wealth.

The work has now outgrown the building, and another million dollars is needed as a monument to the noble benefactor who gave two millions to found Cooper Institute. Of the fifteen hundred who applied last year for admission to the School of Art for Woman, only five hundred could be received, for lack of room. The graduates from this department last year, and the members of the present class, have earned over twenty-seven thousand dollars in the past twelve months. Three pupils are teaching drawing in nineteen of the Public Schools of New York City. One teaches twenty-five hours a week, in eight Public Schools, at two dollars an hour. Several engrave on wood for Harper and Brothers, and for the Century Company. One scholar is now at the head of the Decorative Art Society in New Orleans, with a salary of one hundred and fifty dollars a month, earning nearly as much in outside work. Another, with a photographer in Concord, N. H., receives twelve hundred a year. The superintendent of schools at Winona, Miss., receives one thousand dollars the first year, and she is promised more afterwards. One lady earns twelve hundred dollars in a decorating establishment in Boston. One is designing in the Britannia works at Meriden, Conn. One having married a man of means, has opened a "Free School of Art," with fifty pupils, to show her gratitude to Mr. Cooper.

Is it any wonder when Peter Cooper died, that thirty-five hundred came up from the Institution to lay roses upon his coffin?

His last words to his daughter, Mrs. Abraham Hewitt, and his son, ex-Mayor Cooper, and their families, as they stood around his death-bed, were, not to forget Cooper Union. They have just given one hundred thousand dollars to it. The influence of this noble charity will be felt as long as the Republic endures. It has given an impulse to the study of art, opened a door for women as well as men, and shown to the world that in America work is honorable for all.

Peter Cooper came to highest honors. The learned and the great sought his home. He was president of three telegraph companies, one of the fathers of the Atlantic Cable, and was nominated for the Presidency of the United States by the National Independent party, in 1876, but he died as he had lived, the

same gentle, unostentatious, unselfish man. He said a short time before his death: "My sun is not setting in clouds and darkness, but is going down cheerfully in a clear firmament, lighted up by the glory of God. . . I seem to hear my mother call-

ing me, as she used to do when I was a boy: 'Peter, Peter, it is about bed-time!'"

NOTE. For many of these facts I am indebted to Professor J. C. Zachos, Curator of Cooper Institute, and to Mrs. Susan N. Carter, Principal of the Woman's Art School.

ANNA MARIA'S HOUSEKEEPING.

BY THE NEXT NEIGHBOR.

XIII.

OVER THE MENDING-BASKET.

YOU *have* the serious business of life laid out before you in that big basket of things torn and worn, haven't you, Anna Maria? Just ask me to take off my bonnet and wrap, won't you, and hint that you could endure to have me stay the afternoon? I never did think much of the flimsy etiquette which obliges you to sit with idle hands whenever a neighbor comes in to chat comfortably with you, and loses twenty minutes hearing how the children on the West Side are with diphtheria, and how Mr. Briggs' barn was burned at the Centre last night, and Clarinda Wells is to sing at the concert next week, with various engrossing news of the sort, which you could hear and enjoy just as well while knitting or sewing the ruffle on your apron while you listened. The German ladies don't drop work for every caller. English ladies of rank do not feel that they show one disrespect if they keep on with their lace work or stitching of any sort. You may have heard of the countess who was so fond of plain sewing that she spent her leisure at it, and gave away dozens of linen shirts made in the finest manner, among her friends. I'm not that countess, but I never see a shabby, unmended thing that I don't ache to get hold of it, and make it presentable, and the thought has crossed my mind whether in small society like ours, intimate friends couldn't be of use in meeting round to do up each other's mending and making over, as well as in sewing for the poor. We might sew for the poor and for our friends too, and give sickly Mrs. Dawson a chance to get out on fine days without being haunted with that heaped-up mending-basket, and the boys' trousers that need darning at the knees, and we might let Miss Carington, the school teacher, rest her eyes evenings after correcting a dozen exercises, instead of doing all her own sewing, so that she can send more money home. That would be doing good as we have opportunity, to some purpose.

Well, now, before we begin, have you good needles, long and short? Is the sewing machine in

order? Are your scissors and shears sharp? for you can't do neat mending unless they are. Have you smooth strong linen thread that works easily, silk and twist, and strong sewing cotton, and binding tape; not the glazed sort, but fine, twilled tape, both narrow and wide, with buttons of pearl, linen, agate, horn and metal? You had better spend a dollar at once for such things. You can get a year's supply of all these "findings" of the best quality, tapes, needles, buttons and threads, from the city, for a dollar, and it saves hours of time and wear of clothes to have them ready. Get them, and keep in a locked drawer of your work-stand where the children cannot get at them, to mix and tangle things. Keep stout needles threaded with black linen and white cotton, coarse and fine, and black silk, on a hanging cushion where any one can seize them to sew on a loose boot button, or baste a ruffle, or tighten a coat button in a hurry. The time and the temper I've saved since I learned to keep my needles threaded and handy!

That reminds me, Nellie pet, your boot buttons are loose. Jump up in my lap and let your next friend sew 'em on. Not that black cotton, if you please, nor the sewing silk that frays, nor that fine linen thread either. Give me that stout hank, and a number four needle, and the wax. And, pet, we'll double the thread and knot one end of it only, so there will be no clumsy big knot to mark your soft foot, and we take just three stitches apiece to each button, fasten thread with a stitch in the lining of the boot, without cutting it, and go on to the next, till they're all done; and if one of those buttons comes off till the boot wears out, tell me, and I'll give you a dollar for it. I think you observed that you hated nothing worse than sewing on boot buttons, Anna Maria — the pulling to get the needle through, and thread fraying, is a great trial of patience. So it is, and I think too much of my patience to give it unnecessary trials. If you have good linen thread and wax it well at first and after sewing on each button, and have a needle just right to carry it, it won't fray or break; using double thread, three stitches do the work of six single; and if you fasten thread between the buttons without cutting till all are sewed, you will find it hold till the shoe is

old. There is something in knowing just how to sew on even a boot button.

Now you are not going to waste hours of precious existence in darning those gaping heels of socks! You will cut out the heel entirely, take up the stitches and knit a new one double in an evening. Or you will hire it done by the girls of the Industrial Home, or by old Mrs. Cutter, who earns her missionary money and her liniment by odd jobs at home. If you can't do this, get soft buckskin, and sew heels of that in Joe's socks, as I have seen good housekeepers do. The next socks he has, I advise you to get a pair of stocking savers, of fine leather, like the lining of ladies' boots, to slip over the heel, for they do away with a great deal of mending. It is well to buy socks and stockings that are a size larger than one needs, to allow for shrinking, which makes them wear out. Our merchants are just beginning to sell children's stockings with double-knit heels and toes. The whole sole of hose ought to be double to resist wear, but at least you can line the boys' pairs. Those scarlet cashmere stockings have the feet well worn out, and the color is faded beside, with Katy's method of washing, which leaves all the fine flannels and stockings to soak in strong suds, while she rinses the others, instead of whisking each stocking through its wash and up to dry before the dye can start. But the legs of the pair are firm and good, so if you want fine wool hose that will outwear three pair of woven ones, do you get white Saxony yarn, knit feet to the old cashmere tops, and have them dyed the popular dark red. In this way you get stockings handsome and durable, and the old tops will outwear two pairs of knitted feet yet. Nellie's stockings have broken out in small holes in the heel. Nellie, child, bring me the tack hammer so that I can drive the steel peg into the heel of your little shoe that makes these wicked holes. Looking after the shoe-pegs and welts often prevents damage to stockings.

The high wind tore the sheets this week on the line, and there is no use in sewing up the rent. The only way to get farther wear from them is to turn them. Rip the hems two inches at each end, overcast the selvages of the sheet together, tear it down the middle and hem the edges. You have a neat, new sheet, that will wear six months or a year longer. The corners of the hems are fringing out in the best sheets and tablecloths, because the careless worker did not know she ought to put twice as many stitches there as in the rest of her work, and fasten by sewing the ends over and over. I take it for granted you are too good a housekeeper to hem napkins or towels or sew seams in sheets with the machine, as slack women do. You can't make a machine hem look well on damask or toweling; the work draws, and looks mean, while as for sheets, I wouldn't be buried in one with a machine seam! A machine hem for sheets is another thing. Those tablecloths can only be made neat by paring the corners round, and hemming them again. There is a thin place in

the damask. Give me some ravelings of coarse linen and we will have it darned in a few minutes. Here is another cloth quite worn out in the centre while the ends are good. Cut off two ends the full width of the linen and three quarters of a yard deep; hem these for carving napkins, to lay under the roast and soup at either end of the table above a clean cloth, to save it from spots. The smaller side pieces of your old cloth will do for bread or lunch cloths, to put over a small table. Or, you can cut out the weak part in the middle of your old cloth, and insert a square of half-worn damask from the corner of one in like case, joining the two by herring-bone or open-stitch. A little knowledge of fancy work is the saving of many a half-worn article nowadays. Keep all the old napkins and handkerchiefs—all the old linen you have. You want napkins to wrap cake in, to strain things through, and when past every other use, they are invaluable for hospital lint and *charpie*—which is a coarse lint. We who remember the war and the Sanitary Commission, know how priceless every scrap of old linen in the country was for the hospitals, and such times may come again. If not war, there may be accident, when there will be little time or heart to hunt up necessary things, so keep your old linens and soft worn cotton ready; have them washed, boiled and bleached on the grass, to be pure of all stains, iron them on both sides, to make them soft as possible to raw, shrinking wounds, cut out all seams, hems and bindings, roll them together and keep where you can find them at a moment's notice, with the court plaster and salve, in the medicine closet. Here are old chemises and nightgowns, in good shape yet, but too worn to last through a month's washings. Lay them by, ironed without starch, for sickness, when poultices and liniments would ruin better ones. Here is a nightgown with binding and ruffle worn out; choose thinner, finer cotton, rebind, and whip new embroidery on the neck and wrists. Good gowns will always wear out two sets of ruffles. The children's nightgowns are too short, but quite large enough round the shoulders, and not half-worn. You may put on a deep ruffle to lengthen them, or cut the skirt straight across by a thread, and piece them down by a machine seam, overcast, not felled, goring and hemming the new part to suit the rest. Don't patch that torn sleeve, cut off the weak part and add a new half-sleeve. This chemise band is torn through; if you sew it up, it will break out next time it is worn the same way; cut the torn edges, rip the band an inch or two, and spread the gathers, then add an inch and a half new cotton, facing well to the ends of the band; embroider the bit to match the rest, or work a few scallops in crochet to suit, and the garment is good for another season. Half a dozen buttonholes broken away; that comes of making them too near the end of the binding. Rip off the torn corner, piece the binding an inch longer than the old one, and work a new buttonhole at least

three eighths of an inch from the end. That sort of buttonhole will outlast the clothing it is made on, and Joe can't tear it out, by trying.

Here is a set of merino underwear, shrunken too much to be comfortable, you say. Cut the vest straight down the front from the button flap, add a wide facing of twilled cotton on each side, if the chest needs widening, and make buttons and buttonholes all the way. Cut the binding off the drawers and cut two or three inches from the lower part of the shirt, sew the two garments together by overseaming the raw edges closely, and facing the seam with soft tape. You have a combination suit as convenient and comfortable as those you pay eight dollars for. This all-wool vest is wearing thin under the arms; run it, like the heel of a stocking, with white zephyr wool, and it will wear six weeks longer. Children are always plagued to get in and out of their clinging merino under shirts; cut them open all the way down, and add wide facings to button from top to hem. Your father's under-shirt is wearing thin on the shoulders; take the skirt of an old one, not too worn, and face back and shoulders, catstitching the facing down and new binding the two at the neck. The sleeves, are quite ragged; replace them with a new flannel pair, with knit cuffs at the wrist. It's some trouble, but it all saves buying twenty dollars' worth of new underwear this season, and gives you the money to spend in pleasanter ways.

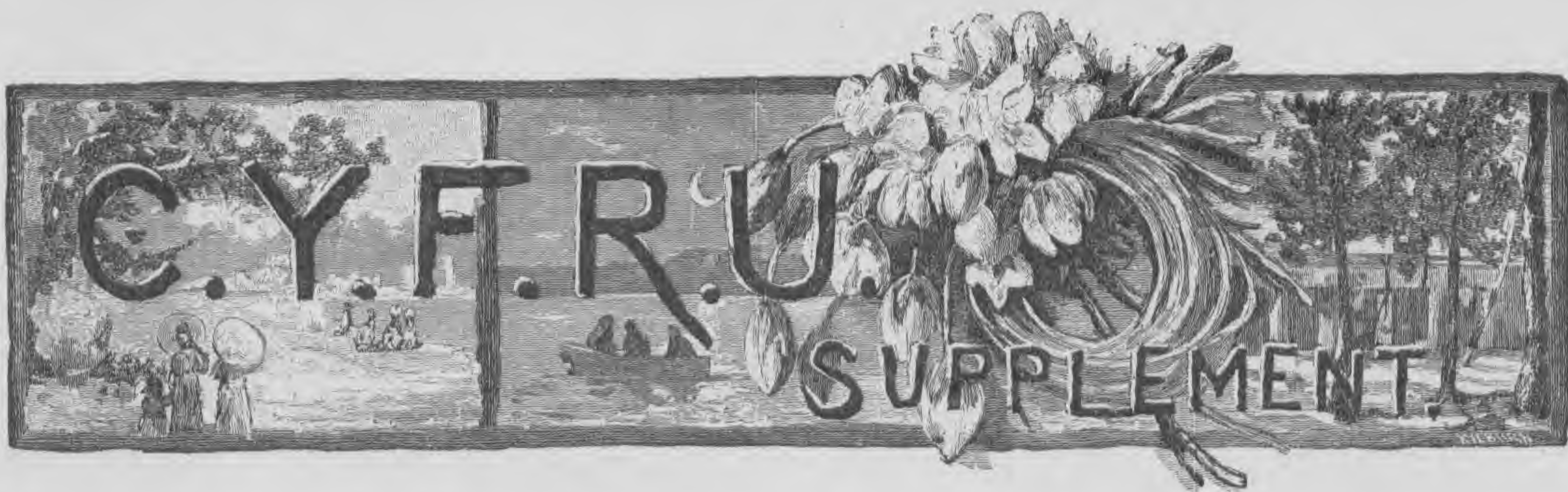
This silk undervest is worn under the arms, and the mate to it has no sleeves at all, to speak of. For the first, insert square gussets, cut from bits of old silk stockings, sewing the edges together over and over. For the other make sleeves out of the long tops of worn silk stockings, ripping the hem, sewing the large end into the arm hole and knitting a small cuff to cling round the wrist. This knit skirt of Shetland wool is completely worn through in front, but it is a pity to throw aside so expensive a piece of underwear. You can match the wool in the city, and with wooden needles knit a new front which will give the skirt three seasons more wear. That Welsh flannel is wearing very thin on the front breadth, but the rest is sound; line the front with thin twilled wool that comes for lining, shrinking it first by washing. Such skirts must be lined, turned hinder part before, and upside down, and new borders crocheted for them before they can be called legitimately worn out. Do you know American women are the most careless and extravagant creatures about clothes in the world, taken as a whole? I notice rich women, who always have been used to money, will twist and turn, retrim and refresh their clothes very much more than women who have to contrive for every new garment they get. One of my acquaintances paid three hundred dollars for an embroidered camel's hair suit, when such dresses first came in fashion ten years ago, and she bought an evening dress the same season for nine hundred dollars. Both gowns are in wear yet, remodeled to suit

the style, and will reappear into newer ones to make variety for five years more. And all these hints about refreshing nice underwear I have drawn from the best dressed women of my acquaintance.

You will call my methods with old clothes making over, rather than mending, and so they are. Life is too short to do so much mending every week, and I prefer to give a fortnight to it the beginning of each season — put on new bindings, stays and facings, sew on buttons so they will stay the whole year, fit up stockings and merino wear and have the business off my mind for three months, except the little looking over which takes in all not more than half an hour weekly.

Joe's trousers come last, and I don't wonder you heave a sigh over them, torn, dusty things as they are. Give Joe a clean, stiff manilla scrubbing-brush, which you will find the best possible thing for cleaning thick clothes, and have him take the trousers out on the back porch and brush them clean. Then leave them on the clothes line to blow and air in the sun half a day before you mend them, and they will be much pleasanter handling. There must be a patch on the knee of one pair, but neither Joe nor any one else need know it. Cut the hole square by a thread, cut your patch an inch and a half larger, baste it true and even, which is the nicest part of the work, stitch it by the machine, open the seams, dampen and press on the wrong side with your heaviest iron. Haven't I seen my friend Mrs. Burrows sit down before six pair of the worst-looking trousers a boy ever went through, insert patches or half a leg as needed, machine stitching them so truly and pressing them so skilfully afterward that no boy, however notional, could object to wearing them?

Tailor's shears and goose, and ample cloth for piecing, made the work very different from the bungling patches which sad-eyed mothers toil over, leaving padded knees which justly are a trial to any boy's sensibilities. You should see the repairs which city tailors will put on gentlemen's clothes. I've seen an eighty-dollar coat with a dozen moth-holes up the front, darned and filled so nicely you had to take a magnifying-glass to find the places. When you know how, cloth is the easiest thing to mend nicely so that piecing won't show. When Joe buys new clothes, see that he brings home large pieces for mending, and don't roll them up and put them away to look bright and fresh when they are used to patch his faded trousers. Lay them in the sun, every day for a week, so that the color will be toned down, not to contrast with the rest of the suit. And put the evil day of mending far off by lining the knees of all trousers with soft twilled linen which will take the wear. I believe in having garments so cared for and reinforced in weak places, and where the wear comes, that they do not need repair, but like the deacon's one-horse shay, last till they come to pieces, and are done with. You will find it much the best way.



TALES OF THE PATHFINDERS.

BY ARTHUR GILMAN.

II.

THE BURIAL IN THE RIVER.

AS I try to make real to my mind the stories of long past history, there appears to me a crowd of men standing on the shores of the Old World, all gazing wistfully to the westward. Age after age they stand and look. Ever and anon one drops out of the scene as time passes and years bring him to the end of his life, and now and then I see one, more adventurous than the others, push a frail vessel into the dashing surf, and disappear in the mists of the distance, determined to do what he can to solve the mystery of the sea.

Among the gazers walk those who carry in their hands books telling the stories of the travels of such as Marco Polo, and of others who give the weird traditions of the Island of St. Brandan. I see them, anxious to find the island and the giant, longing to see for themselves the wonders of Cipango, and stirred by the recital of the sufferings of those exiled Christians of Spain, who, frightened by the dreadful Moors, sought peace in the Island of the Seven Cities. Not a man had been over the Atlantic in those days, and no daring navigator had shown, by sailing round it, that the world is round. With his longing curiosity and active imagination one of these peering inquirers, like George Eliot's Jubal, climbs the highest mountain to get wide views, and it showed him —

Nought but a wider earth; until one height
Showed him the ocean stretched in liquid light,
And he could hear its multitudinous roar,
Its plunge and hiss upon the pebbled shore.

The scene hushed him to silence.

He thought, "This world is great, but I am weak,
And where the sky bends is no solid peak
To give me footing, but instead, this main,
Like myriad maddening horses thundering o'er the plain."

What a transporting mystery there is in the ocean even now, though men have ploughed its trackless waves for ages, and have sailed through its remotest seas.

Columbus was one of those early gazers, and the story of his great career is known to us all. In his early years he cherished a hope that some day the sea would open her mysteries to him, but the time was slow in coming. Year after year he carefully studied everything that he thought might throw light upon the subject of his longings, though to all others they seemed the merest dreams. Mr. Lowell makes him say —

I know not when this hope enthralled me first,
But from my boyhood up I loved to hear
The tall pine forests of the Apennine
Murmur their hoary legends of the sea
I heard Ulysses tell of mountain chains
Whose adamantine links, his manacles,
The western main shook growling, and still gnawed;
I brooded on the wise Athenian's tale
Of happy Atlantis, and heard Björne's keel
Crunch the gray pebbles of the Vineland shore,
For I believed the poets.

It is true that the great mariner read all that he could about old Ocean, and though he may have believed the poets, he certainly did not have the same faith in all that he found in prose. He determined, however, to seek, at whatever cost, to solve the mysteries of the sea. He read in the greatest authority of the time that the ocean encircled the ultimate bounds of the inhabited earth, and that beyond it all was unknown. "No one," said this writer, "has been able to verify anything concerning it, on account of its difficult and perilous navigation, its great obscurity, its profound depth and frequent tempests; through fear of its mighty fishes and its haughty winds; yet there are many islands in it, some peopled, others uninhabited. There is no mariner who dares to enter into its deep waters or, if any have done so, they have merely kept along its coasts, fearful of departing from them." This was the picture

the wise man drew, but his tempests, obscurity, haughty winds and mighty fishes could not daunt Columbus. He made his bold push westward and was successful. All Europe rang with the praises of his wondrous discovery. The age of romance was brought back and men opened eager ears to every tale that pretended to come over seas, and the new Western World became the place of marvels and the most promising region for the lover of adventure to visit. It was said that sirens, who had not been seen since the days of Ulysses, inhabited some of the islands, and that no ship bearing iron could sail near others on account of the loadstone they contained. These facts may be seen written down on the maps of the time even now, and they were then believed. We cannot put ourselves into the position of the people of those days when all science was in its infancy, if, indeed, modern science can be said to have been born at the time.

Among the many gazers westward who were incited to seek their fortunes in the new land, was one Francisco Pizarro, a man of low birth, intense selfishness, and fiendish cruelty. He made a number of incursions into regions of South America to get gold. One of these incursions was made in 1531, and in it he had the assistance of the king of Spain, who was likewise greedy for gold. It was the next year that he captured the Inca of Peru and put him to death unmercifully, after having exacted a ransom of fifteen million dollars for his life. The following year he took the capital of the country, Cuzco, and eight years later he was killed by a son of one of his followers who had suffered from him.

Let us now turn from the picture of ambition and covetousness to a brighter story, of love and adventure. The times were not like ours, and even the ministers of religion were not free from acts and motives which look cruel and wicked in our enlightened eyes. It was about eight years after the discovery of our continent by Columbus, that there was born in Spain, then the land of enterprise, a boy whose name was destined to be forever linked with the romance and history of exploration. This remarkable boy was Ferdinand De Soto. He belonged to a family of the highest rank that had not riches enough to keep up the establishment naturally belonging to its exalted position. For this reason little Ferdinand's parents thought, as more enlightened parents have concluded in our day, that they must economize, and would do it in their boy's education. It came to pass, however, that a rich count, who proved to be as hard-hearted and arbitrary as he was rich, offered to pay the expenses of the boy's instruction. Why such a man should have taken enough interest, even in a bright boy, to send him to school, and afterwards to the university, certainly I cannot tell, but that is what he did, and young Ferdinand grew to be worthy of his good fortune. He became not only a good scholar, but also a tall, well-formed man, of activity and vigor, and possessed of an undaunted spirit. I have no doubt these traits com-

mended the young man everywhere, for Spain was then the most forward of the nations in warlike enterprise and in the spirit of old chivalry, that spirit which the world has so much admired.

Boys at school and students in the universities sometimes give attention to other things than their books, and so it was with romantic Ferdinand. His stern patron had not thought of this when he admitted Ferdinand to his house, or he would have taken measures, I am sure, to keep him from learning too well the good traits of the accomplished heiress of the establishment. This young lady was as sensible and beautiful as she was accomplished, and Ferdinand did not fail to learn the fact. Nor was Isabella Bovadilla slow to see the good traits of her father's ward; perhaps the fact that her father had given him such marked approval rendered him still more attractive in her view. Many ladies had admired Ferdinand, but to none had he given his homage and his heart until now when he fell in love with Isabella.

Sad were the hearts of the two young people when Isabella's arbitrary father repulsed Ferdinand's suit with haughty scorn, for he hoped to marry his daughter to some man as wealthy as he was himself. Little did he dream of the changes that time was to work. When Ferdinand was assured that his poverty lay at the root of his trouble, he determined to enter upon a career which should bring him a fortune; and as a matter of course, America was the land he looked to, for it was the paradise of chivalric adventurers, the El Dorado of the Spanish imagination. No other land offered equal attractions, and he soon sailed for Darien, leaving Isabella, in whom he fully trusted, in her father's care. A year passed away, and another and another, and still he was in the same region of Central America, with no more wealth than he had before. He had been sent, in 1528, to explore the coast of Guatamala and Yucatan, to discover a strait cutting the American continent, which should afford a near passage to China. Many of the early explorers looked in vain for this strait. Captain John Smith went up the Chickahominy River with this end in view; and you may see on the map of Canada that the French called the rapids near Montreal *La Chine*, which means in their language China, because they thought the river ran from the country they wanted so much to find. They did not know how broad our continent is, or they would not have supposed that little creeks might be straits connecting the ocean on its two sides. During these tedious years the lovers did not hear much of the doings of one another; Ferdinand was able to send only infrequent letters to Isabella, from whom the message came back that she was still faithfully waiting for his return.

We shall find that Isabella did not know the nature of the work in which Ferdinand was engaged, and that as soon as she found out what her lover was doing, she protested, like a true woman, against it, though at that time young people and old were educated to think that many cruel and bloody acts, from

which we shrink, were honorable and right. De Soto was undoubtedly involved in some of the deeds of his countrymen in Central America, that were too dreadful for me to describe, and yet much of it was done under the cloak of religion. Pizarro heard of the desirable qualities of the young man, and asked the governor of Darien to send him to help in the conquest of Peru; but I must add that Ferdinand sympathized with Pizarro in none of his base deeds, and especially that he is said to have protested against the treacherous murder of the unfortunate Inca, Atahualpa. I am sorry to have to confess that his feelings on the subject were not so deep that he was able to resist the temptation to accept his share of the ransom so wickedly extorted from the wretched Inca, and of the gold stolen from his subjects. It was a sore temptation, for the riches thus acquired enabled him to return to claim the hand of Isabella. He knew that it would remove the objection to their marriage that her father and rich friends had entertained.

When Ferdinand reached his native land, he found that his arbitrary and relentless patron had died, and that he had left but a small portion to Isabella. The young hero was therefore proud to offer with his heart sufficient wealth to reinstate the lady in the social station she had occupied in her father's life. It must have been a proud moment for Ferdinand. He had left home a poor boy of nineteen, under the displeasure of a powerful patron, and now he returned a great conqueror, under the smiles of the proud emperor Charles the Fifth, who showered honors upon him and was ready to grant his largest request. Such was the nature of the changes that came over the lives of adventurers in those days, and it is not a wonder that exaggerated stories were told of the wealth and wonders of a country where such things were possible.

I think that few people believed that Pizarro had been the real conqueror of Peru. They knew too well his low birth and wretched character, and felt that but for the skill and bravery of De Soto the expedition could not have turned out a success. We may hope that they gave the young knight credit for his abhorrence of the dastardly deeds of the campaign.

For some years Ferdinand and Isabella lived in splendor among the grandees of Spain, but even their large fortune was not sufficient to bear the heavy drafts that this life demanded, and after a time Ferdinand found that it was necessary to enter upon a new scheme to fill his coffers. It happened that in the year 1536 there returned to Spain one Cabeza de Vaca, who had led an expedition in America. He had visited the interior of the continent, and as there was no one to expose the untruthfulness of his statements, he related the most astonishing tales of the wealth and magnificence of the places he had visited. The easily excited imagination of his countrymen was stimulated to the utmost,

and De Soto saw that the opportunity that he needed had come to him. He proposed to the great emperor Charles, then the most powerful ruler in Europe, to take command of an expedition to conquer the land of "Florida" for him. Florida was a name vaguely applied to a region in America of indefinite extent, supposed to be of immense wealth, besides possessing the Fountain of Youth which would restore strength and vigor to the aged.

The stories of this land stirred Spain deeply, but the feeling became greater and greater when it was known that the emperor had authorized De Soto to lead



THE BURIAL OF DE SOTO.

to the New World the greatest expedition that Spain had ever fitted out. Words cannot tell what enthusiasm was aroused, nor with what zeal the people rushed to claim the honor of sailing for the El Dorado, or Land of Gold, as it was called. You have read of the Crusades, and remember how all Europe followed Peter the Hermit when he preached for volunteers in the beginning of the movement. The uprising in Spain at this time has seemed to historians to resemble that one. Not only did adventurers who coveted gold and honors see an opportunity here, but the religious

mind was touched by the stories told of the heathenism of the people of Florida, and ecclesiastics saw an opportunity to do something to bring converts into the Church, and thus increase the power of the Pope. It was the custom of the early explorers of America to say that they intended to convert the people of the lands they should visit to the true religion, that is, to their own religion, which was the religion of the Church of Rome. Columbus set the fashion, and all seem to have followed him.

When the expedition was ready to sail, in the spring of 1538, it comprised priests stimulated by the religious zeal of which I have spoken; high-born hidalgos of Portugal, who longed for adventure under the direction of a leader so successful as Ferdinand; cavaliers of Spain, some of whom had sold their possessions to defray the cost of their outfits, and a crowd of minor worthies, each of whom might, I am sure, have told an interesting story of the reasons that had led him to volunteer. Nor were the men alone. One wife accompanied her husband because, forsooth, he had invested his all in the expedition and could not leave anything behind for household expenses during her solitariness. The fair Donna Isabella was drawn by the strong cords of the mutual love that had so long filled her heart. Seldom if ever before had women accompanied men on an enterprise of this kind, and it was a good sign that they went now, though the fact did not preserve the expedition from a dark fate.

On a bright April day, in 1539, amid the booming of great guns and the plaudits of admiring crowds, the fleet gayly set its sails and left the shores of Spain behind as it pushed out into the little known ocean. It was almost the end of May when Cuba was reached, and at Santiago, the capital, the fleet was welcomed with the same tokens of rejoicing that had marked the departure from home. Havana was visited, and there Ferdinand made his arrangements to leave Isabella as governor while he continued to the destination on the mainland. Ferdinand did not seem to be very desirous to leave his young wife, for he occupied the most of a year in making ready for the new start, though one would think that there must have been but little to do. When the fleet finally set off, it employed the summer of 1539 in coasting along the western shore of Florida. The winter was passed in inactivity near the spot on which Tallahassee was afterwards built. But so evident had been the want of success, that all except the never-daunted leader were cast down and hopeless. The natives had shown them no gold, and ever desirous of putting as great a distance as possible between the strangers and themselves, always told them misleading and exaggerated stories of wealth to be found in remote regions. The invaders were kept aimlessly wandering for two whole years through the region now covered by Florida, Alabama, and Georgia. The natives were treated in such an arbitrary and hard-hearted manner that they placed every obstacle

in the way of the Spaniards, and at last the enmity brought on war. On one occasion a terrible battle was fought, in the course of which all of the baggage of Ferdinand's followers was burned. This must have added much to the discomfort of the Spaniards.

All this time the lonely Governor Isabella was getting but little information in Cuba of the work of the expedition, but she was learning more of its nature. The better she understood it the less she liked it, and at last she wrote a letter to Ferdinand, begging him to desist from his acts of cruelty towards the Americans, and return to her, lest the wrath of Heaven should fall upon him. An appeal of this sort from the one he loved best added to his distress, but was not powerful enough to turn the strong man from the purpose to which he had pledged himself before his sovereign and his men. On and ever on he journeyed, over the Mississippi, through the unbroken wilds of Arkansas, always following the supposed traces of the Fountain of Youth or the land of gold.

Despite the losses and discouragements, it was probably a gay and pompous march, and we may picture the expedition passing slowly through the country, its brilliant banners flying, its horses caparisoned in many colored trappings, and its priests adding to the picturesqueness of the scene by their brilliant robes, while they made the woods solemn as they chanted the service of the Church with all the splendor possible beneath the moss-covered arches of the live oak and the cottonwood. Thus mountains were passed over, and prairies and morasses were left behind, the firm-hearted leader the while trying to impart his own courage to his languid followers, whose numbers and physical force were slowly wasting away.

There is a limit to human endurance, and even one so determined as De Soto must find it at last. Thus it was that, in 1542, he became convinced of the hopelessness of continuing his search in the wilds of Arkansas, or in the Indian Territory, and reluctantly turned his face eastward. The tragedy now comes to a sudden close. No sooner had the expedition reached the banks of the great river than De Soto was smitten with a fatal fever. It soon became apparent that no human hand could give relief to the man whose followers had boldly proclaimed to the savages that their leader was immortal and invincible. Steadily the dire fever made its certain progress, and on the twenty-first of May, death closed the great explorer's career, dashed to earth his brilliant prospects, left his hopeless followers alone in an almost uninhabited wilderness in which nature lavishly displayed the utmost exuberance of her riches, as if to tantalize them in their homesickness, and made the faithful Isabella a forlorn widow, not even permitted the sad privilege of mourning for her husband, for his fate was long to be only surmised by her.

The members of the company were perplexed to know how to keep the savages from the knowledge of the fact that their valiant leader was dead. With sad rites they buried his body by the side of the river, but

soon afterwards they feared that it would tell their dangerous secret to any Indian who might ride that way, and they finally bethought themselves of a plan to avoid this catastrophe. They might have burned the body, but probably the priests protested against a disposal of it that appeared to them heathenish.

It is possible that some priest learned in the history of the Eternal City, remembered that he had read of the disposal of the body of one of its conquerors eleven hundred years before, and suggested that De Soto should find a mausoleum in the river he had done so much to make historic. There are good reasons why the sea should become a great burial-place. How many have died on ships far from land, long before their loved ones, if they had any to close their eyes for the last sleep, could reach a country where a sepulchre could be found! Of course no reason of that kind ever made it desirable to bury any one in a river, and so few have such burials been that I can recall but two. Just eleven hundred and thirty-six years after the waters of the little river Busento in Southern Italy flowed over the body of the conquering Goth, the mighty Alaric, Scourge of God, the great river of the Western World, hid forever beneath its slow-flowing current all that remained of the romantic and chivalric hero of proud Spain.

Can you imagine the scene when the forlorn and fearful remnants of the proud troop that we saw so

gayly sailing from Spain, furtively bore the body of their leader from the shore to the middle of the Mississippi, and with all the solemnity possible, committed it to that most secret resting-place? It was a sad scene, and there has been no other like it in American history. The busy rush of trade has carried thousands over the burial-place, and the crash of war has disturbed the quiet of the scene, but no man can say that he knows where De Soto is buried. The great river will keep the secret forever.

Time hath passed on since then, and swept
From earth the urns where heroes slept;
Temples of God and domes of kings
Are mouldering with forgotten things;
Yet not shall ages e'er molest
The viewless home of *Soto's* rest.
Still rolls, like them, the unfailing river,
The guardian of his dust forever.

Three long years passed before the followers of De Soto reached Mexico and were able to convey to Isabella the sad news. During this time her husband's fate had been a mystery to her. The misery of her life then came to a sudden close. Her heart broke under the strain, and in three days she, too, was no more. Thus ended another of the tragedies which mark the story of the discovery and exploration of our continent.

IN CASE OF ACCIDENT.

BY DR. D. A. SARGENT.

II.

THE MUSCLES.

THE bones form the framework of the body, and give it stability and firmness.

They also serve as levers to which the muscles are attached to give the body and limbs motion. With this end in view the muscles are distributed throughout the entire system. Some are long and slender, some are short and thick, others are broad, circular or fan shaped, the form of the muscle depending upon the function which it is to perform (*fig. 1*).

As a general thing, the long muscles are placed where a great deal of motion and little strength is required, and the short and thick muscles where a great deal of strength and little motion is needed.

The muscles are made up of bundles of small fibres, somewhat as ropes and cables are made.

The smallest of these fibres have the power of contracting upon themselves when irritated, just as have

some kind of insects. As the fibres are all closely united, the slightest movement is communicated throughout all the bundles and thus the muscle as a whole is made to contract. A muscle having once contracted to move a limb or part in one direction cannot move it that way again until it is pulled out or relaxed by the action of some other muscle which acts in opposition to it.

In order that the muscles may be always ready to act as soon as possible and support the bony framework, they are kept in a state of partial tension.

This is the reason that the ends of the bones are displaced in case of break or fracture, and why it is so difficult sometimes to get a dislocated bone, as the thigh bone at the hip, into its socket.

The contractile power of the strong muscles of the thigh has to be overcome by a greater resistance from without.

The muscles are attached to the bones by means of cartilages and tendons, and the bones are joined to each other by ligaments. The tendons and ligaments

are as a general thing unelastic and unyielding, although they may be stretched and elongated, if they are subjected to a great strain in early life. What is commonly termed loose-jointedness, is frequently occasioned in this way. This is one reason why boys should be careful not to stretch their limbs too far in contortion exercises, or carry heavy weights for a long time or distance.

It is good for the muscles to be used in moderation, and they generally increase in size and strength in proportion to their employment. But if the muscles

are naturally weak, or if they are used too much without relaxing, they lose their elasticity and contractile power, and gradually stretch out, bringing the strain upon the tendons, cartilages and ligaments. In this way round shoulders, drooping head, crooked spines and other deformities are often occasioned.

INVOLUNTARY MUSCLES.

The heart, stomach and intestines are also muscles, but they act without volition, and are termed involuntary muscles.

These muscles can be influenced indirectly by the will. In taking violent exercise, the muscles of the heart are made to contract vigorously, and the stomach and intestines

are often overworked by having an excessive amount of food to digest.

STRAINS.

Not unfrequently the muscles are strained from over exertion, as in taking a very long walk, or in making any unusual physical effort without preparatory training. Such a strain, unless accompanied by nervous exhaustion, is of little consequence. Two or three warm baths, followed by gentle rubbing and rest, generally sufficing to overcome the bad effects.

Sometimes in jumping or in heavy lifting the strain is so severe as to rupture some of the muscular or tendinous fibres. When this is the case, time and rest afford the only cure. If the injured muscle is on the stretch, try to bring the ends of the torn fibres together by straightening the limb, and supporting the muscle with bandages.

Keep the limb in this position until the fibres have had time to unite, which generally requires from one to three weeks, according to the severity of the strain.

Make no movement of the muscle without the bandages, for fear of lengthening the fibres, and rendering the muscle forever weak and unreliable.

If there is any pain, cold applications once or twice a day will tend to allay it.

CRAMP.

When one is suffering from nervous debility and much wearied from over-exertion the muscles are apt to make spasmodic contractions. The arms, hands, fingers, feet and legs are drawn up without volition, and held as if by an iron grasp. This condition of the limbs is commonly called "cramp." It is likely to come on while bathing in cold water, or when exposed suddenly to a low temperature. The remedy while in bathing we will speak of when we come to treat of accidents for drowning.

If the cramp is local, affecting only one limb at a time, make an effort to extend the leg or part affected, thus stretching the muscles under the spasm. At the same time apply warm water if accessible, and rub vigorously with the hands.

If it is cold, dispense with the warm water altogether, and rely upon the friction of the hands. If the cramps are general, affecting all the limbs, put the person afflicted into a hot bath as soon as possible. If such a thing is not to be had, apply hot water to one limb at a time, keeping the rest of the body wrapped in blankets or extra clothing. Rub vigorously with the hands where the affected parts are accessible, and get the patient into a warm bed at the earliest convenience.

SPRAINS.

When the ligaments are injured, we have what is termed a sprain.

It is generally caused by a sudden shock or blow being given to a joint by which the ligaments which surround it are violently wrenched or lacerated. A sprain is so common that it is thought to be of little import; but it is often more serious than a broken bone. Many a useless ankle or knee has been the result of a slight sprain uncared for.

The joint most likely to be sprained is the ankle. Whenever a sprain occurs, lose no time before attending to it, however trivial it may at first appear. If a bad sprain, you will have a great deal of pain at the time, accompanied usually by a feeling of faintness.



FIG. I. THE MUSCLES.

If at the ankle, sit down and remove the shoes and socks at once. Ascertain from a comparison of the feet whether there has been a fracture or a dislocation. If so, send for a physician as soon as possible, and keep perfectly quiet until he comes. If there is no fracture or displacement of bones, but only an excessive swelling about the joint, send for a pail of hot water. Bathe the foot in this for fifteen to thirty minutes, keeping the water as hot as it can be borne, and applying it with a large sponge or towel. Then wrap the foot with strips of flannel saturated with hot water, and cover this with dry cloths. If any distance from home, do not attempt to walk, but ride in a carriage if one can be procured. If near home you may be assisted in walking by two persons, one on each side. It is better not to touch the injured foot to the ground.

Every step taken after a bad sprain adds a day to its permanent recovery. Complete rest is the only cure for a sprain. This is so important that it is well to consider the advisability of having the foot done up in splints, or a plaster cast, by a physician. If the sprain is not severe enough to warrant this treatment, then put the ankle under the most favorable circumstances and patiently wait for its recovery. Remember that the muscles are connected with the bones by tendons, and that any contraction of the muscles moves the bones at the joints and thus brings a strain upon the ligaments. The movement of a ligament prevents a sprain from healing as effectually as the movement of a bone keeps a fracture from uniting.

To avoid pain and swelling, keep the foot in a raised position, supporting it on a cushion or pillow.

At night, have the clothes at the foot of your bed

lifted from your ankle by a piece of barrel hoop supported from the ceiling by a cord. If there is still considerable pain, keep up the hot water applications for a day or two, and cover the ankle with a layer of cotton cloth saturated with laudanum, before applying the flannel bandage. After the pain and inflammation has subsided, the hot water applications may be abandoned, and cold water used instead.

Hold the ankle under a cold water faucet until it becomes painful, then remove it, rub dry, and apply camphorated oil, arnica, almost any good stimulating liniment, with the hands. This process should be repeated twice a day for two or three weeks, according to the rapidity of the recovery. Do not keep moving the foot to see if it still pains you, or attempt to bear your weight on it with a view of walking without crutches. Provide yourself with these valuable aids, and don't think of walking without them for four or five weeks at least. Unless this precaution is taken, a bad sprain may trouble you for weeks, months and years, and permanently unfit you for many of the sports and games that boys delight to indulge in.

A sprain of the wrist, elbow or knee should be treated in very much the same way as a sprain of the ankle, care being taken to use hot water applications to allay inflammation, and to keep the affected joint as quiet as possible. In sprains of the wrist or elbow the arms should be supported by a sling as in case of fracture.

In a sprain of the knee rest is more important than in a sprain of the ankle. The injured parts must be kept quiet and in place by straps of adhesive plaster, flannel bandages, splints or plaster casts.

LITTLE BIOGRAPHIES.—HOW SUCCESS IS WON.

BY SARAH K. BOLTON.

II.

JOHN B. GOUGH.

IT was a cold Sabbath evening in October. A young man walked the streets of a Massachusetts city — Worcester — shivering and despairing. The windows he passed were warm and golden with the light of home, but he was homeless and penniless. Those who knew him turned away without any token of recognition. His hands trembled, his steps were unsteady, his brain throbbed, he wished he were dead. Later he stood by a railroad track with a bottle of laudanum pressed to his lips; but to take his own life seemed to him, outcast though he was, too cowardly. But what was the cause of this wretched-

ness? Ah, this young man was a drunkard, loathsome and despised.

And had he expected to be an outcast, a drunkard, at twenty-five? Oh, no; he took at first only a glass of beer with his boyish companions. He was very social, and he wanted to enjoy life. He could, of course, control himself. He never expected to "form a taste for liquors," as the saying goes. But, as nearly always, the serpent fastened its coils about him, and at last he was helpless.

His life had been a peculiarly bitter one. Born in a very humble home at Sandgate, on the English coast, gleaning with his mother and sister after the reapers, that they might have bread to eat, or cleaning knives and shoes in the gentleman's house where his father was a servant, there was little to make a boy's

life bright. When he was twelve, a family offered to bring him to America if his parents would pay fifty dollars for his passage. It was difficult to earn this, but his mother thought, after the manner of mothers, "Perhaps in the New World our John will be somebody." So, with tears, she packed his scanty clothing, putting in a little Bible, and pinning these lines on a shirt:

Forget me not when death shall close
These eyelids in their last repose;
And when the murmuring breezes wave
The grass upon your mother's grave,
O then, whate'er thy age or lot
May be, my child, forget me not.

JANE GOUGH.

Then, again and again she pressed her only boy to her heart, and stole out behind the garden wall, that,



JOHN B. GOUGH.

unobserved, she might catch a last look of the stage which carried him to London.

The voyage was a long one of nearly two months. The little lad often cried in his cabin, and he wrote back, "I wish mother could wash me to-night," showing what a tender "mother's boy" he was. When New York harbor was entered, and he was eager to see his adopted country, he was sent below to black boots and shoes for the family.

His school days were now over. After two years of hard work in the country, he sold his knife to buy

a postage stamp, and wrote his father, asking his permission to go to New York and learn a trade. Consent was given, and, in the middle of the winter, our English lad of fourteen reached the great city, with no home, no friends, and only fifty cents in his pocket. Hundreds passed by as he stood on the dock, holding his little trunk in his hands, but nobody spoke to him. But at last, by dint of earnestness, he found a place to enter as errand-boy and learn book-binding, receiving two dollars and twenty-five cents a week, and paying two dollars out of this for his board. How his employers supposed he could live on one dollar a month for clothes and washing has never appeared.

The first night he was placed by his boarding-mistress in an attic, with an Irishman who was deathly ill. The second night the man died, and the horror-stricken young boy staid alone with the dead till morning.

Now nearly two painful years more went by. Finally, though he earned but three dollars a week, he sent to England for his mother and sister. When they arrived two rooms were rented; the girl found work in a straw-bonnet factory, and, poor though they were, they were very happy. John was now sixteen, devoted to his mother, and still a noble, unselfish, persevering boy.

At the end of three months, through dullness of business, both children lost their places, and now began the struggles which the poor know so well in our large cities. In vain they looked for work. Then they left their two decent rooms, and moved into a garret. Winter came on, and they had neither fuel nor food. John walked miles out into the country, and dragged home old sticks which lay by the roadside. He pawned his coat that the mother, who had now become ill, might have some mutton broth.

One day he left her in tears, and went sobbing down the street.

"What is the matter?" said a stranger.

"I'm hungry, and so is my mother."

"Well, I can't do much, but I'll help you a little," and he gave John a three-cent loaf of bread.

When the boy reached home, the good woman put the Bible on the rickety pine table, read from it, and then all knelt and thanked God for the precious loaf.

In the spring, he obtained employment at four dollars and a half a week, but poverty and privation had fallen too heavily, rested too long, upon the mother. One day while preparing John's simple supper of rice and milk, she fell dead. All night long the desolate boy held her cold hand in his; then, in that Christian city, she was put in a pine box, and, without shroud or prayers, carried in a cart, her two children walking behind it, and was buried in the Potter's Field.

For three days afterwards John and his sister never tasted food. Probably the world said "Poor things!" but it is certain that nobody offered to help them. Bitter at heart, John ceased to attend church. He strolled out in the fields instead on the Sabbath. Oc-

casionaly he went to the theatre, a place he shunned when his mother was alive. Step by step he went along the downward road; not in a day, or a month, or a year, did he become a sot.

He took comic parts on the stage, because he was good in mimicry, and his companions were not of the best. Sometimes, it is true, he worked at his trade, for weeks abstaining from drink and other spendthrift ways; then appetite, or the invitation of old friends, beguiled and overpowered him. Once he went on a fishing voyage, laying up considerable money, married and made a pleasant home for his wife; but presently he went back to his old habits, and at the time when she and her baby died, he was lying drunk and unconscious in the house.

It is needless to say that often, in agony, did he lament the taking of a first glass. How easily, but for that, could he have become self-educated and honored; now at last, ragged, and broken in body by delirium tremens, he was walking the streets of Worcester, on that Sabbath evening, absolutely homeless and hopeless. He was thinking, utterly heartsick as it is possible for man to be, of his ruined life, when a hand was laid on his shoulder. He was startled. Nobody had spoken to him in a friendly way for months.

"Mr. Gough, I believe?" said the stranger.

"That is my name," he replied, and passed on.

"You have been drinking to-day," said the kind voice. "Why do you not sign the pledge and protect yourself?" And then the young man, whose name was Joel Stratton, took his arm in a brotherly way, and, as a brother might, asked if he would not like to be a sober man, go to church once more, and have friends once more.

John Gough answered sadly: "I should like all these things first-rate. Such a change cannot be possible, however."

"If you will but sign the pledge and follow my advice, I will warrant that it shall be so. I will introduce you to good friends who will take a pleasure in helping you to keep good resolutions."

After some pondering, he determined to make the effort. He said:

"Well, I will sign it."

"When?"

"I cannot do so to-night, for I *must* have some drink presently. But I certainly will to-morrow."

That night he drank heavily, and all the next day at his work the longing for drink remained unbearable. But when night came he said, "If it should be the last act of my life, I will keep my promise, even though I die in the attempt, for I believe that man has placed confidence in me."

At the temperance meeting, with almost palsied hand, he wrote "John B. Gough" to a Total Abstinence pledge. After a sleepless night, he went to his work. But the craving for his daily drink was as fierce as ever. His whole body trembled, and his brain seemed on fire. It was the height of torture, of temptation. Finally, as night came on, he said, "I

cannot fight this through. I will not yield, but I shall die."

Just then a lawyer, Jesse Goodrich, came in.

"I saw you sign the pledge last night, Mr. Gough. Come in and see me. Keep up a brave heart. Good-by! God bless you."

These words seemed sent from heaven. He repeated them over and over again on his way home. The friendship, the kindness, the sympathy, seemed divine. For six days and nights, in a wretched garret, without one hour of healthy sleep, without one mouthful of food, John Gough fought the dreadful battle with appetite. Weak, famished, almost dying, he crawled out into the sunlight; but he had conquered.

Hope, the ambitions of manhood, came back into his desolate life. The ragged clothes were brushed, and the weekly temperance meetings were regularly attended. He soon spoke with such intense earnestness, in his gratitude, and his desire to rescue others, that he received invitations to go to neighboring towns, which he accepted, waiting only to earn suitable clothes. He kept his pledge for five months, and then, yielding to physical weakness, broke it. Tremblingly penitent, almost despairing, he went to Mr. Goodrich and others, telling them that he had disgraced them as well as himself, and that he must leave Worcester forever. But they held on to him; they would not let him go, and he re-signed the pledge.

Soon after this, he became a Christian, and now, for nearly forty years, he has honored the name he bears. "If the pledge had been offered to me when I was a boy in Sunday-school, I should have been spared those seven dreadful years," I have heard Mr. Gough say. He was now twenty-six. This year he made three hundred and eighty-three addresses, receiving about three dollars for each, and paying his expenses out of it. With the first money he could possibly spare, he purchased *Rollin's Ancient History*, bent upon self education.

And now there came into his life noble Mary Whitcomb, a teacher, with fine mind and true heart. She has shared alike his poverty and his fame. No life of Mr. Gough will ever be complete without "Mary" written on every page.

For eleven years he spoke eloquently throughout our country, winning thousands upon thousands of signers to the pledge. This public life was by no means an easy one. He was opposed by the liquor interest, and not always aided by those who should have been his friends. In no year did he receive, on an average, over twenty-five dollars a lecture, and, in his zeal and sympathy, hundreds were given without charge.

He was now urged to visit England. Sensitive to an unsuspected degree, never forgetting the stains on his early manhood, he sought the advice of Doctor Lyman Beecher.

"John, my son, don't fear," he said. "I have prayed for you. Go, and the blessing of an old man go with you."

England gave him the greeting she gives to heroes. Exeter Hall, London, where the welcome meeting was held, was draped with the flags of England and America. For four hours great crowds waited on the sidewalks for the doors to be opened. His brother Englishmen were eager to hear the famous orator who had gone out from them a poor, unknown boy. As he spoke simply yet touchingly, the enthusiasm was unbounded, hundreds weeping with joy. All through Great Britain, crowds, numbering often seventeen thousand persons, came to hear him. On his thirty-seventh birthday he spoke in Sandgate. The village people listened as though he were inspired. Old Mrs. Beattie, who had known him when a lad, hastened to grasp his hand. When he slipped twenty-five dollars in hers, telling her he was in her debt, she said, "Goodness me! What for?"

"For a bottle of milk and some gingerbread you sent me twenty-four years ago when I was starting for America."

Inquiring into her needs, he expended money without stint, for coal and groceries, and as long as she lived sent her fifty dollars each Christmas.

Rich and poor alike were moved by the pathos and eloquence of Mr. Gough, and failing other expression, brought gifts of gratitude; the London Temperance Society, a dinner set of eighteen pieces of solid silver; the poor woman of Edinburgh a handkerchief, saying to Mrs. Gough, "I'd give him a thousand pounds if I had it. Tell him when he wipes the sweat from his face while speaking, to remember he has wiped away a great many tears while he has been in Edinburgh."

One day, while riding to the station, Mr. Gough observed the driver tie a handkerchief about his neck and then lean his face close against the window.

"Are you cold?" asked Mr. Gough.

"No, sir."

"Have you the toothache?"

"No, sir. The window of the carriage is broke, and the wind is freezing, and I'm trying to keep it from you. God bless you, sir! I owe everything I have in the world to you. I was a ballad-singer once. I used to go round with a half-starved baby in my arms for charity, and a draggled wife at my heels half the time, with her eyes blackened. And I went to hear you in Edinburgh, and you told me I was a *man*, and when I went out of that house, I said, 'By the help of God, I'll *be* a man!' And now I've a happy wife and a comfortable home. God bless you, sir! I would stick my head in any hole under the heavens if it would save you any harm."

At a meeting in Glasgow, to which three thousand "outcasts" came, the worst woman in the city was present. She had been in jail scores of times, and was the terror of the borough. Touched by the story of Mr. Gough's sad life and of his mother, and his rise from despair, she came forward to sign the pledge.

A gentleman said, "She cannot keep it. She will be drunk before she goes to bed to-night; better not give her the pledge."

"If I say I wull, I can," said she simply, and signed it.

Two years afterward Mr. Gough went to her home. "Ah," she said, "I'm a *puir* body. I dinna ken much; and what little I ha'e kenned has been knocked out o' me by the staffs of the policemen; but sometimes I ha'e a dream. I dream I'm drunk, and fighting, and the police ha'e got me again; and then I get out of my bed, and I go down on my knees, and I don't go back till the daylight comes, and I keep saying: 'God keep me—for I canna get drunk any mair.'"

She supported herself and daughter by sewing, and gave all her spare time to reading the Bible among the degraded, urging them to reform, following in Mr. Gough's steps afar off, but as nearly as she could.

Soon after Mr. Gough's return to America, Joel Stratton lay dying. He hastened to his bedside, and the man who had moved England by his eloquence embraced tenderly the waiter of the Temperance Hotel who had saved him. "God bless you, Stratton! thousands are thankful that you ever lived."

"Do you think so?" he said feebly. "When I laid my hand on your shoulder that night I never dreamed all this would come to pass; did you?"

After his death, Mrs. Stratton received three hundred yearly from Mr. Gough, in token of his gratitude.

For the past thirty years John B. Gough has worked untiringly on both continents. Though he has swayed brilliant and crowded audiences by his marvelous eloquence, he has not forgotten to visit prisons and poor-houses. Thousands of the lowest have written to him in their despair, and thousands of the highest in their admiration for his work. His beautiful home at Hill-side, Worcester, has no end of choice remembrances from such friends as Spurgeon, the Earl of Shaftesbury, Cruikshanks, Doctor Guthrie, and our own statesmen, and ministers, and poets. His choice library shows his love for books. The last time he was in England four thousand of the *elite* of that country received him at a garden party in the grounds of Westminster Abbey. Canon Wilberforce, Canon Duckworth, Samuel Morley, the American Minister, and others made addresses. Dean Stanley led him through the grand old abbey. The next morning twenty London papers, some in six columns, gave an account of this great reception to the great moral hero of his time.

At Sandgate, where he went to lay the corner-stone of the Memorial Coffee Tavern bearing his name, the enthusiastic people removed the horses from his carriage and drew it through the streets. He was invited to dine at the stately homes where fifty years before he had cleaned knives and blacked boots. Public banquets were given in his honor. To his own country each time he has been welcomed back with demonstrations no less hearty.

When asked recently the secret of his success, he replied: "Whether I speak to one or to thousands in

my audiences, I always try to do my best." Another secret is his throbbing sympathy for humanity. He is determined to win the erring, and therefore succeeds. He has given nearly nine thousand lectures, and travelled about five hundred thousand miles to accomplish this purpose. Over a million copies of his lectures have been sold, and one hundred thousand of his helpful autobiography. He and his wife have reared seven fatherless children, and I know not how many boys he has helped through college. Mr. Gough's hair has

grown white in his labors. He has perhaps done more than any other one man to make temperance an absorbing topic of the time. When he began his work few had taken the pledge; now the signers are millions. States are prohibiting that which works harm to citizens; schools are teaching that beer and brandy poison both blood and brain. But his own personal history, his struggle and his complete victory shall remain to the end of time as personal hope and courage for the most complete outcast.

ANNA MARIA'S HOUSEKEEPING.

BY THE NEXT NEIGHBOR.

XIV.

FOOD AND DRINK.

THE saying that every house has a skeleton in its closet has more fact than poetry about it, if we are to take the evidence of our sense of smell. You come upon the skeleton behind the door of an unaired clothes-closet press, where soiled things and stale bedroom odors have their own way week after week, till you wonder nice girls can bear to put on dresses which hang in them. Too many pantries and food closets have their spectres, if we judge by the mouldering, unsatisfactory odors about ice-box and meat safe, and the worst is, that it doesn't stay there, but comes out in the shape of dull headaches and sore throats and low fevers which haunt the house.

This is serious talk, but it isn't more serious than the facts call for. Doctors who spend their lives looking into these things, tell us that every year, out of a certain number in town or country, beside the old and infirm, and those who inherit disease or die of accident, twenty thousand die needlessly of illness from bad air and bad food. They are not all poor folks who live in squalid, fever-stricken alleys and must buy the refuse of the markets to eat at all. The most luxurious homes suffer equally with the poor, and no house is safe until the skeleton has been hunted out and laid permanently by daily, intelligent care. Housekeeping is not a matter of mere comfort and respectability, and every woman and girl must learn their responsibilities, for the health, strength and life of the family is in their hands. The food people eat three times a day, the water they drink, the air they breathe, constantly have more to do with their happiness and success than money or talents, and more to do with their long life than any other care or medicine.

Pure water is growing scarcer to find as the country

is older and more closely settled. For water may look clear as mountain brooks and taste sweet as the rill from a glacier, yet be very unsafe to use. There is a town in Northern Ohio noted for its spring of sparkling, delicious water, which never fails to make new-comers violently ill when they drink it, from some mineral in solution. The wash of weedy shores, the use of animals, the drainage of fields, may make the pond water which supplies town reservoirs very unwholesome, while few would find anything to complain of in its taste or smell. Well water is not safe to drink if there is any sink drain, stable heap or vault within a hundred feet of it, for the wash from all such places soaks through the soil six feet in a year and more, and sooner or later will reach the well or the underground spring which supplies it. Nor can you call water fit to use when slops and washtubs are emptied on the ground about it, or rains can wash the soil through the ill-fitting curb. A tightly covered well is not so good as an open one, for water needs air to make it sweet. One thing you can be sure of, that though water which is bright and sparkling may be unsafe to drink, water which isn't clear, and looks or tastes unpleasant, is sure to be dangerous. When spring opens and the town water, or the well, runs roily and yellow for days from the melting of the last snow which carries the wash of the banks with it, or when in summer it smells fishy, or has the cucumber taste we come to know so well from the water-weed or the mucus in the pipes which carry it, you don't need to be told that it isn't fit to use; and it's an even thing if you don't have low fever or chills before the season is over, from drinking it.

What are you going to do about it? Use filtered water for drinking and cooking entirely. You can buy a filter for five dollars, and you will find it the best use you can make of the money. Let alone health and safety, in a week after using it you will begin to wonder why the meat and vegetables taste so

much nicer, and remark how much better tea and coffee this seems to be than the last you had, and after a little you will discover it is owing to the filtered water. Everything cooked in pure water has a finer taste, and tea and coffee are not the same things made with it. But a filter wants care; for the sponge which strains the worst impurities out of the water, should be washed and dried in the sun, or in the oven, every day, or it soon grows foul. The best way is to have two sets of sponge, and let one air all day while the other is in use. Then the packing of sand and charcoal in time is clogged with impurities which begin to wash back into the water, and the sand has to be washed, sunned, and dried, and the charcoal burnt over in a red-hot retort to consume the waste with which it is loaded. Be sure to get one of the new filters with two sets of strainers, which can be unscrewed as easily as you take the mold out of an ice cream freezer, so that one set can be cleansed while the other is at work. To make sure of pure water, change the packing once in three months. If you cannot have a filter, and are not certain of the safety of the water, boil it, and let it cool in a porous earthen jar in the shade and wind. Boiling frees it from animalcula or vegetable matter, and softens it, and emigrants whose neighbors were sickening all around them from the bad water of ponds and marshy springs, have kept in perfect health by drinking no water which had not first been boiled.

It is a great thing to have arrangements complete for a supply of pure water, and you want to do as much for food. Now let me tell you that you can't have food fit to eat that is kept in a close cupboard, however clean. If you have but a closet to keep food in, it must have a window and a gentle draft of air to carry off the odors which else will spoil all the more delicate flavors. For the odors of food are its finer parts, and in an airless closet these settle and are absorbed by the wood, the plaster, the milk and butter, the flour and other eatables. Then you have the butter turning cheesy or frowy, the cream taking a bad taste, the milk souring sooner than it ought, the very pies, bread, and flour losing their wholesome sweetness. In the storeroom you can't keep salt fish, sour milk, cheese and onions in all their fragrance, and have anything else nice. Did you ever have the privilege of going into one of these common country store-rooms, not the sweet dainty places we read of, smelling of sugar, and spice, and all that's nice, but one of the sort we don't read of, clean and scoured, but where the fragrance of the bean pot vies with that of the buttermilk jar, and the sour yeast in the corner, and the fried fat in the doughnut kettle, and yesterday's soup, and to-day's chowder thicken the atmosphere with fish and onions? If you had, it would be the best lesson on ventilation of food you would want. The very shelves and walls of those old pantries get the cheesy and salt fish and hammy smell, and you can't keep anything sweet in them till the plaster is whitewashed and the wood washed with

purifying lye. If you would have wholesome food, Anna Maria, keep the pantry window down at the top night and day, except in the coldest weather.

Food of all kinds keeps better on clean dishes, so don't think it is too much trouble to pour the gravy into a fresh bowl and put the slices of meat on a clean plate, and turn the few spoonfuls of jam into a saucer instead of leaving it in the smeary compotier, which is a better name than our awkward "sauce-dish." Reason why: thin smears and daubs of food spoil soon and help spoil the rest. Especially see that the milk, cream and butter are put away in clean ware. Milk will keep sweet longer for this little precaution, and things are so much pleasanter to see and handle. Then everything must be closely covered with cloth and small plates. It is well to buy different sizes of cheap ware for covers, and the odd little pottery mugs, bowls, and pitchers are very convenient for holding bits and ends of food too good to throw away. Beside, food keeps better in this ware than in anything else.

Fat of all kinds needs the nicest care to be sweet and wholesome, for nothing takes odors more rapidly, and if you leave cupfuls of grease, or drippings, to stand open in the closet, you must expect to find a queer flavor in your fried potatoes, and several different savors in the plain piecrust beside the one you wanted. Keep all the fat from cooking in a small stone jar, well covered, try it out once a week into a clean jar and let it cool uncovered in a draft of air. In winter set it out doors to freeze, which refines it remarkably. At other times keep it tightly covered in the icebox. Fat which has absorbed a coarse taste can be purified by freezing and become nice again.

Butter wants much more care than most people give it, both in making and keeping. The way to secure good butter for winter is to buy it in fifty-pound firkins in September, when it is usually as cheap and good as at any season of the year, have it put up with a very little saltpetre and sugar, and in a clean place it will keep sweet a year. I haven't given many receipts, but here is one which I have tried over and over, and which can't be too widely known and used:

Take two pounds best dairy salt, one pound white sugar, one ounce saltpetre finely powdered and sifted through muslin. Mix all these well together. Keep in a bottle closely corked, and work one tablespoonful into one pound of butter and it will keep indefinitely. There is nothing hurtful in the compound, and the saltpetre prevents the acid from forming, which gives the butter a strong taste. You can work this into market butter if you choose to take the trouble, and I think it will repay you.

Instead of opening the firkin every day for butter for the table, cut out a week's supply at a time, to be kept in a small stone jar, and keep the butter in the large package, closely covered top and sides, with clean linen cloths, with a large cloth and wooden cover over all. Butter soon loses its best flavor when

open, and becomes not much better than so much suet. As good butter is the key note of a nice table, and as poor butter is a very unwholesome thing to eat at all, you must pay particular attention to its keeping. A plate of it that has been shut up in a closet with meat, left-over food and close air, is not fit to enter the stomach of a human being.

Keep milk in the purest, coldest air you can find, with a thin cloth over it. Don't take the warm new milk that hasn't had time to get cold since the milkman's cart hurried off with it from the cow, and set it away in a tightly stoppered can, for all milk wants to stand open to the air, that the animal heat and flavors may pass off thoroughly; if this isn't done, the particles in the milk decompose, giving the unpleasant odor you will notice in close cans, and making it unfit to use. Dairies which keep the milk in huge close tin drawers or cans instead of open pans make a great mistake, for neither butter nor milk kept in this way is fit for food, nor will it keep nearly as long as it should. Never let milk stand near a sink or any refuse. I have heard of children who took diphtheria from milk which had absorbed sewer air from the vent of a stationary washbasin where the nurse kept the pitcher cool at night. If you must keep milk in a sick-room, nursery, or in a close closet, let it cool and air for three hours in the best place you can find for it, then put it in a tight can, with a flannel case, and set it in a shallow pan of water in a draft, which will keep it cold and preserve it sweet as long as possible.

The icebox or refrigerator wants a great deal more care than it gets in general. Left to the servants, and only half cleaned in a season, it is the most uninviting place for food one can imagine. The waste pipe should be in order, so that no water stands in the box, for water melts ice, and moisture spoils food quickly. The box should be washed thoroughly with strong hot suds, rinsing with cold water, wiping and airing before fresh ice is put in. "Well, ma'am," the old iceman said, as he waited for Mary to finish wiping the box one morning, "I'm pleased to find your box is always clean, for ice wants a clean place. If you could see some of the boxes we put into, with splashes of sour milk and grease and scraps o' meat and potatoes and everything sticking to the shelves as the girls leave 'em! I don't see how anybody can eat what comes out of them." Every plate, pitcher, and dish that goes into the icebox should be clean as possible and closely covered. All dark corners of meat should be trimmed off, for these spoil quickly and give a stale smell to the box. You do not need to be told that vegetables and meat must be kept separately from milk, butter, and more delicate things. It is a good plan to keep lumps of charcoal in each compartment to purify the air, and absorb any odors that may escape.

The care of meat is a nice thing too, and for the health of the family, needs more attention than it often gets. After it has been well-chosen, bright colored, fine-grained, with a firm white fat, freshly cut,

with no dried and darkened edges or corners to spoil, and sent home, it must not lie in paper one moment more than is necessary, for paper, which is nothing but pulp of rotten rags, glue and lime, spoils food very soon. Take the meat out, and the first thing, scrape it clean all over. You hear people tell you to wash meat before cooking, and others say that it should be wiped only, for water washes away the flavor, but scraping removes all that is not nice, and the meat keeps better for being put away clean. Fish should be cleaned and wiped with a coarse towel and lie wrapped in clean dry cloth with salt over it. Meat may be kept without salt by searing the outside on a very hot griddle, turning it on all sides and letting each cook half a minute. This closes the pores so that the juice does not escape, and the air cannot readily affect the flesh; it also makes the meat tender. Keep it in pure air, away from sour milk, yeast, salt fish, or any strong flavors, for meat and flour absorb bad air as well as butter, and spoil the quicker for it.

Vegetables need a cold dark place where they will not freeze. They should have clean bins or boxes, and be clean themselves when stored. A furnace-warmed cellar is no place for them. A cold, dark cellar or garret is the best place for fruit, which should be often sorted and picked over. Apples take bad flavors from being with other stores. Pick out all inferior and bruised ones at first, and make them into apple butter, which is the best way of keeping them, and is always ready for pies; and as a *compote*, which is better, I think, than our word sauce, which has so many other meanings already. Potatoes should be picked over in February, and scalded in a kettle of boiling water for two or three minutes, to prevent sprouting. You will find your spring potatoes much better for it. Onions should be kept in shallow boxes, and need as much looking after as choice fruit, for they are very sensitive to bad air, and, when not in the best condition, are about as healthy to eat as diseased meat. When perfectly sound there is no healthier food than onions, and an old English rhyme runs:

Eat leeks in March and onions in May,
And all the year after physicians may play;

which is very sound sense, as old housekeepers and doctors can tell you. They purify the blood, correct biliousness and dyspepsia, and are better for consumption and children's diseases than most medicines. Many vegetables have strong medicinal principles. Tomatoes have a similar principle to calomel, only not injurious. All the talk about injury from tomatoes comes from eating them unripe or overripe, or from cans where their acid has dissolved and corroded the tin. I hope some time people will know enough to put tomatoes up in glass jars exclusively. Sour vegetables, or fruit shut up in tin cans for six months, cannot be the most wholesome. The rind of cucumbers contains a very strong purga-

tive, which is a reason why one should be very careful to pare them perfectly, and soak them in cold water an hour to extract the drastic juice. One last word: never serve any dish of whose perfect sweetness you are not entirely sure. The slightest stale, flat, or changed taste is reason enough to throw it away. I knew a whole family made violently ill by eating a soup which stood a trifle too long in warm weather. Not one of those who ate it tasted anything amiss, but the cook confessed she couldn't be sure whether anything was the matter with it or not, and she thought it too good to throw away. I don't think any of those people got well of the sickness the whole summer for this paltry economy. The reason why such care is urged in keeping and storing food, and keeping dishes and cooking utensils strictly clean, is because the little decay or ferment, such as gives the rank smell to ill-washed kettles, will start a change in food which is very dangerous in the system. When your mother or aunt complains of dinner not agreeing with her, or one of the boys calls out in the night for Jamaica Ginger, you don't think that the slightly sour bread, or the canned tomatoes that had grown sharp, or the stew that had changed, "not enough to hurt," as most cooks say — those few drops of cankering acid, or yeastly ferment — have acted on the sensitive juices and tissues of the body like verdigris or calomel. People can eat food that isn't just right a good while and not notice the effect, but nature always pays her debts. These things have what doctors call a cumulative effect, which means

that it grows stronger by repetition, till an ulcerated sore throat, or attack of colic, pulls one down, and he never gets his strength fully back again. One hears such sad cases of neglect all the time. Three years ago this spring, a young lady of one of the wealthiest families in Boston went to finish her shopping for Newport. It was a warm, oppressive day, and going out of the store, she felt suddenly faint. Her strength was utterly prostrated from that moment; she was taken home in a carriage, and in two weeks was dead from diphtheria. In that strictly guarded home, with every appliance for health and luxury, the cause was found in the waterpipe which led from the expensive refrigerator, with its plate-glass doors and marble shelves, to the house drain, so that all its vile air rose among the food and poisoned all the inmates. Neither the smart footman nor the first-class cook had noticed anything wrong, for people in general have very blunted sense of smell.

Be thankful if you have senses which quickly warn you of unwholesome air. Never mind if dull people tell you that "the smell is in your imagination," for the fault lies with them and not with you. If all this watching and looking after things seems too much effort, remember that the thing in this world which can be done without effort and care is not worth attempting, and the best inheritance in this world is an athletic, healthy spirit, in love with work for its own sake, and which counts its ends worth all the strength and striving one can put forth.

DAYS AND NIGHTS IN THE TROPICS.

BY FELIX L. OSWALD.

CHAPTER VII. (*Continued.*)

EXPERIMENTS WITH TRAPS.

ONCE or twice it looked, indeed, as if he were going to spring directly into our faces, but before long his strength relaxed, till at last he sat glowering and exhausted at the bottom of the hole, deaf to our shouts and heedless of the little pig that kept trotting around in a circle, in the hope of finding the outlet of this novel pen. The trapper then knelt down, rested his gun-barrel upon the edge of the pit, and with a single shot, earned the government bounty of five dollars. The ball had struck the jaguar between the eyes and passed through the centre of his skull.

"Now just leave them here for a moment," said he; "let's take a look at the other pit; I shouldn't

wonder if we catch the partner of this spotted thief."

"How long does it take a man to dig a pit of that sort?" asked the captain.

"About a week," said the trapper, "but a couple of Indians will do it in three days."

"Wouldn't it be better to save that trouble altogether?" I asked; "we might have shot that fellow in the trees."

"Yes, but hardly with a single ball," said the trapper, "and you get twice as much for a skin if it isn't riddled with buckshot. If you do not hit a jaguar right through the head, he takes an amazing amount of killing. Up in the Mesilla Mountains my horse once slipped in the rocks and slid down upon a cliff where I had to build steps with flat stones before I could get him out, and before I was done a jaguar crawled out of a ravine and made a leap at us, perhaps because we had stopped the only outlet of his

den. My horse saw him in time, and received him with a kick that sent him head over heels to the bottom of his ravine, and before he could get out I fired both barrels of my shot-gun at him, but he charged us again, and once more the horse saved my life and almost stunned him by a second kick. I re-loaded my gun as fast as I could, and I am sure that this time he got the full charge of both barrels, for I let him come close before I fired, but he had strength enough left to crawl back into his den, and when I looked for him he had disappeared in the cliffs."

"Oh, come quick, Señor, the pit is broken," cried Benny, who had run ahead of us; "we must have caught another jaguar, and a big one; I saw a large fat brute at the bottom of the hole."

"That's too good to be true," laughed the trapper; "but I declare, you are right," said he, when we came in sight of the pit; "the brush is broken, sure enough."

"There's a jaguar in there as big as a donkey," said our black cook.

"No, bad luck, that's something else," said the trapper, after peering into the pit under the shade of his hand, "but what can it be? there are no bears in this neighborhood. Oh, come here," said he, after a second look; "I'm blind if that isn't a tapir; I can see his snout and his pig ears. That'll be a tough job to haul that fat brute out, and no bounty for such catches. Let's get the jaguar first."

"How in the world did that old fellow happen to get in here?" I asked.

"The tapir? I'll tell you," said the trapper. "I guess the pig made as much noise as the other one, and the tapirs mistook it for the squealing of their own young ones. 'Water-hogs,' the Indians call them, and by their nature, they are really nothing but a large kind of porkers; their flesh has the same taste, and they have the same kind of bristles instead of hair. Like wild hogs, they rush to the rescue whenever they hear the outcry of a pig, and hunters have sometimes been attacked by a whole herd of them. This fellow lost his own life by trying to save a pig's, and his comrades, I suppose, ran away when they saw him go overboard."

CHAPTER VIII.

INHABITANTS OF THE TREE-TOPS.

When we got back to the jaguar-trap, we found two Indians who had been attracted by the sound of the shot, and peered curiously into the open pit.

"How much will you take to skin this jaguar and haul a tapir out of the *fossa*-pit?" asked the trapper, who seemed to know them both.

To our surprise, they made us the following offer: They would carry the whole jaguar to Las Vegas if Don Ruan would let them keep the meat and permit them to exchange the tapir for a pet monkey of theirs. We agreed, on condition that the monkey was to be delivered on the following day, and with-

out much more ado, they hauled the jaguar out, by slipping a noose over his head, and after releasing the pig in a similar way, one of them shouldered the jaguar and walked away as if his burden had been the merest trifle. In Southern Brazil, where the roads are often impassable for horses and carriages, the natives transport all kinds of merchandise on their own shoulders, and in the mountains even travellers are not ashamed to saddle a stout Indian and mount him as a miller would his donkey. In the Andes there are professional carriers who are trained from the time they can walk, and learn to carry two or three hundred pounds without any inconvenience, and over roads where no horse could follow them.

The night promised to be clear, and as we had brought a supply of provisions along, we concluded to re-set the traps and pass the night in the woods. The boys were delighted at the prospect of a camp in the wilderness; and a good day's work would have been followed by a good night's rest, in spite of hooting owls and screaming panthers, if it had not been for the neighborhood of more terrible musicians.

As soon as the sun went down we heard from the depths of the woods a noise like the deep grunts of a herd of old hogs, and gradually the grunts turned into whoops and the whoops into deafening roars. There are no lions in South America, and if there had been any around we could not have heard them just then, for the voice of every living beast on earth is drowned by the roar of the Brazilian *Mycetes*-monkey, or howling baboon, a monster about the size of a mastiff, but provided with an air-bladder that swells his throat like a bag-pipe, and increases the power of his voice about twenty-fold. *Voice* is hardly the right word; it sounded like the droning roar of a big engine when the steam escapes through a throttle-valve. Now and then one of the old males seemed to address the assembly with a few words of a deep-mouthed announcement, whereupon they all grunted in chorus, and then stopped to listen to the further remarks of the veteran.

"Why, that reminds me of the mines on the Rio Francisco," said Juan, "where forty or fifty negroes are pulling at the same rope—it just sounds like a troop of men all shouting together."

Our black cook seemed to share that opinion.

"The Indians in this country seem to have no manners at all," said he, when he came back from the creek with a pail of water. "In New York the police would lock them up and fine them five dollars apiece if they made such a noise after dark."

"I wish we had one of those policemen here," remarked the captain. "I would give him five dollars extra to shut those wretches up."

"What makes them keep up such a frightful noise, boss?" asked the cook. "Wouldn't it be enough if they gave three good shouts and one hurrah, and be done?"

(TO BE CONTINUED.)

WHAT TO DO ABOUT IT.

V. and K. "Will you please tell us some nice verses to write in autograph albums?" The WISE BLACKBIRD dislikes to encourage such a social nuisance as the keeping of an autograph album, which, in the estimation of sensible people, ranks with such idle, annoying pursuits as the collection of old postage stamps, military buttons, and samples of earth from noted places. How much association with persons or places does one get from these trifles? The only possible use for autograph albums is that they serve to recall the names of acquaintances which might otherwise die out of one's mind, and the best taste and best custom prescribes merely the writing of the name, address and date in the album. Neatly written in straight, well-spaced lines, this really looks much better than the crooked, ill-penned verses of doggerel or weak poetry, signed with a smear and a blot, which disfigures most albums. The lines must be very brief, pithy and uncommon to add to the value of any such collection. They need not express affection or compliment for the owner of the book, as in the old verse albums which usually addressed the person for whom the lines were written as "fairest of the fair," and breathed romantic devotion. You will find in Pope's Essay on Man plenty of short, terse sentiments of a general sort, like —

Be thou the first true merit to defend:
His praise is lost who stays till all commend.

Coleridge has a line which carries much meaning:

Goodness and greatness are not means but ends.

Suppose you make a point of selecting a good short sentiment in prose or poetry every day, and write it down in a little book. Then you will not be at a loss for a motto, inscription or album contribution. Here is a pretty thing which may mean little or much as you would have it:

If love were what the rose is,
And I were like the leaf,
Our lives would grow together,
In sad or singing weather,
Blown fields or flowerful closes,
Green pleasure or gray grief,
If love were what the rose is,
And I were like the leaf.

Here is one by Mrs. Craik, the author of "John Halifax," which would be sweet for any friend you were very fond of:

A girl who has so many wilful ways
She would have caused Job's patience to forsake him,
Yet is so rich in all that's girlhood's praise,
Did Job himself upon her goodness gaze,
A little better she would surely make him.

H. S. "How long is the *Great Eastern*?" Its length is six hundred and eighty feet, width eighty-two and a half within the paddle boxes, one hundred and eighteen feet including them.

FANNIE S. "How many children had Charles the First?" Eight in all, of whom six lived, Charles the Second, James the First, Henry, Duke of Gloucester, Mary, wife of William of Orange and mother of William the Third, Elizabeth, who died prisoner at Carisbrooke Castle, and Henrietta Maria, wife of Philip, Duke of Orleans. You see it was a very distinguished family, after all its reverses.

LOU VERNON. "How can I clean a wire web hairbrush? Washing rusts it." Dip it in weak, hot soda water, rinse and dry quickly in the sun or over the fire.

2. "Can you tell me where I can find a piece called 'Rock of Ages?' It begins by a young girl singing the hymn, and shows how it was sung by the same person in different periods of life. And another one called *Widow Duddle* (comic), both prose." Will any reader who knows either of these sketches kindly say where they may be found? One thing the BLACKBIRD cannot take time for, is to fix the place of stray trifles which perhaps never were reprinted, and to find which at all one must hunt down fifty collections and elocutionary readers.

3. "At what age do you think it proper for young ladies to go into society?" Not till they are eighteen certainly. The longer girls can be kept girls the better for them, and prudent mothers in fashionable circles are drawing the lines more strictly in this respect than was formerly the custom in American society.

4. "Where can I find instructions for embroidery on satin?" None of the popular books on embroidery give special instructions for working on satin. The same stitches and silks are used on this as on other materials, with care not to pull the stitch tightly and draw the fabric. Satin lends itself better to painting than to embroidery.

5. "How can I make my handwriting characteristic?" By not thinking about its character, or trying to write anything but a plain, legible hand without ornament.

A. L. C. "Who wrote Grecian and Roman history? I have just read them in the Latin, and want to know the writer or writers." Herodotus, called the father of history, is the earliest Greek historian known. Xenophon wrote the *Anabasis* and *Hellenica* on Grecian affairs, and Thucydides was also a noted historian of that country. Plutarch wrote the lives of notable warriors and rulers, Polybius, T. Livy, Tacitus, Suetonius and Ammianus Marcellinus are the most prominent writers of Roman history.

THE WISE BLACKBIRD.

C. Y. F. R. U. COURSE.

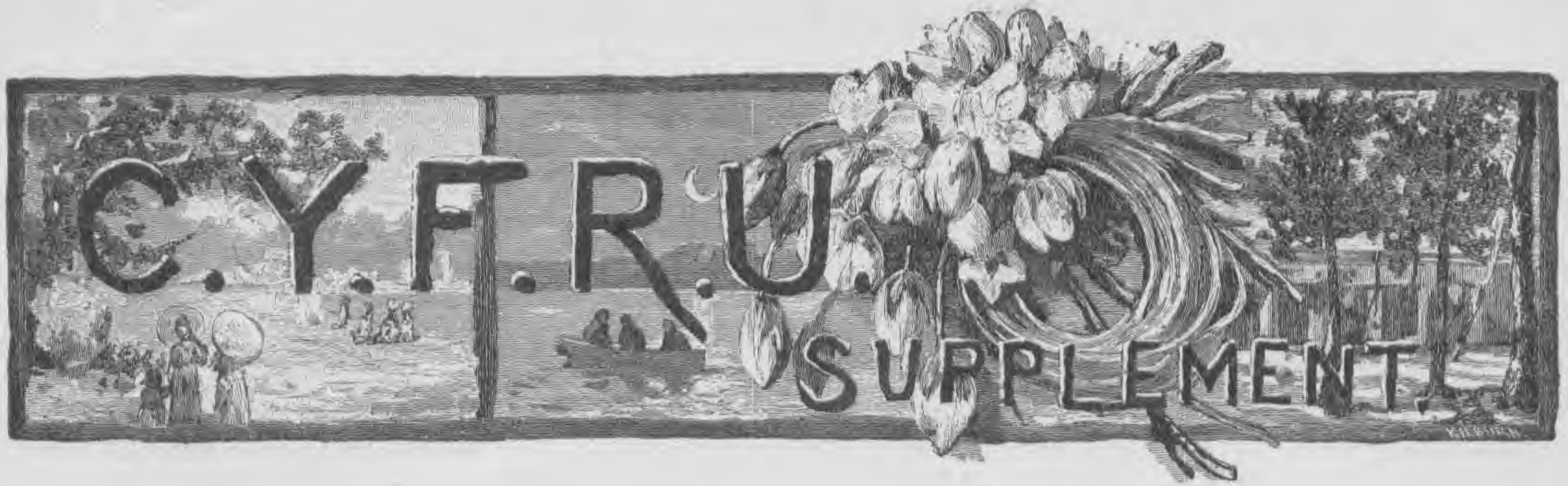
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TALES OF THE PATHFINDERS.

BY ARTHUR GILMAN.

III.

HOW A COLONY WAS LOST.

A NUMBER of scenes crowd upon me this morning as I think of the subject that I am to treat. I seem to stand on the shores of old England just three hundred years ago this twenty-second day of September. A small vessel is making its way into the harbor of Falmouth, bearing news from the westward. It is the *Golden Hind*, and it tells a story that our good poet Longfellow has embalmed in his lines entitled "Sir Humphrey Gilbert." The watchers by the shore are told how the five vessels that had been sent to distant Newfoundland had fared; how the largest, fitted out by Sir Walter Raleigh, had long before returned, how the next in size had been lost before trying to return home; and how the ill-success, the tempestuous weather and the unpropitious prospect had caused all to want to turn towards England; and then they heard the story that the poet has told—how the commander, the good Sir Humphrey Gilbert, had gone down with his vessel, the *Squirrel*, a boat that we should think scarcely big enough to sail along our coast with.

Just as the decision had been made that the three remaining vessels should return and give up their attempt, so the seamen said, there passed between them and the land "a very lion, to our seeming, in shape, hair and color; not swimming after the manner of a beast, but rather sliding upon the water with his whole body (not excepting the legs) in sight." The men were probably alarmed, but Gilbert professed to see a good omen, though the beast, which was probably a seal or sea-lion, turned its head angrily to and fro, gaped fiercely at the intruders, as he considered the seamen, made ugly demonstrations with his long teeth and glaring eyes, and sent forth a lion-like roaring or bellowing with its horrible voice.

I seem to hear the seamen tell, and rejoice in telling, the story of the self-sacrificing bravery of the good commander as he refused to leave the *Squirrel*, though it was so small and was overcharged with artillery and other warlike freight which made its safety in the Atlantic tempests that were to be encountered in a September voyage, very doubtful. With what feeling do they speak his words again as he said, "I will not forsake my little company going homewards with whom I have passed so many storms and perils." I hear them tell how the voyage progressed until the ninth of September came, the fatal day when the *Squirrel* was near cast away; when they saw Gilbert sitting with the good Book in his hand, and, as they approached near, heard him say, "We are as near heaven by sea as by land." I think their voices dropped as they told the breathless group about them that at about twelve of the clock that same ninth of September, being Monday, suddenly the lights of the *Squirrel* went out, "as it were in a moment," and the watch on the *Golden Hind* shouted that the general was cast away, which was, alas, too true, "for that moment the *Squirrel* was devoured and swallowed up of the sea!"

Now let us turn to our Longfellow, and read:

He sat upon the deck,
The Book was in his hand;
"Do not fear! Heaven is as near,"
He said, "By water as by land!"

This heroic adventurer has not a little connection with the story I am to tell, for he was a half-brother of Sir Walter Raleigh, who fitted out his fleet, and who sent out the colony that was lost, and as he was himself lost exactly three hundred years ago this very month in which I am writing, a vision of him will force itself upon me. He was one of the old Pathfinders, albeit one who failed in his effort, which was to find a passage to Asia around the north of our continent. The

passage has not yet been found, and at this moment the papers are discussing the subject with little more prospect of solving the tragic problem than there was in the days of Queen Elizabeth, who gave our Gilbert on the eve of his departure from England, a golden anchor as a token of her regard.

The next scene that comes to me this morning is one in which the queen is prominent. Raleigh had been spending some time in Ireland, where he had heard a part of Spenser's *Faerie Queene* read by its author, who had been dissuaded from giving it to the world by the criticisms of some of his friends who did not fancy rhymed verses. He brought Spenser and his poem to London, and soon the literary world was welcoming a new light whom critics have never since tired of calling the most poetic of all his tribe. You have all heard of the scene when Raleigh brought himself to his sovereign's notice. She was on a walk, and came to a place where the mud of the way threatened to soil her fine clothes. Such places cannot have been few in those early days, for good roads are things that our ancestors did not know even in favored England, and in England's capital. As the queen hesitated and as her other courtiers did not see how to overcome the difficulty, the new-comer proved the man for the occasion, and his gorgeous cloak fell into the mud before his sovereign to serve as a foot-cloth. The action was an inspiration, and lifted the hero to a place of prominence in the court. Perhaps it led to the efforts to found a colony in the New World, and therefore to the loss of the colony that I am to tell of.

Another scene that comes to me reminds me that it was this Walter Raleigh who first told our fathers how to smoke tobacco. Europeans have been burning "the Virginia Weed," as it is called, for three hundred years. It is said, but I am not sure that it is truly said, that one day, as Raleigh was writing and smoking, he called his servant to bring him some water, and when the servant came with it, he threw it all over his master, whom he innocently supposed to be on fire. It does not sound to me like a true story, but there it stands in history, and it comes to me as I have seen it in pictures ever since I was a small boy. It may serve the good purpose of fixing in our minds the date of the introduction of tobacco into Europe. It is connected with the other story of weighing tobacco smoke. It is said that one day when the queen and Sir Walter were sitting together chatting while he smoked his pipe, the royal dame said that she would lay him a wager that with all his ingenuity, he could not tell the weight of the smoke that came from his tobacco. "The thing is quite easy," said Raleigh, as he weighed a quantity of tobacco and placed it in his pipe. When the whole had been burned, he placed the ashes in the scales and told the surprised queen that the

difference in weight between the tobacco and the ashes was the weight of the smoke. Elizabeth paid him the gold with a smile, as she remarked that she had heard of alchemists who had turned their gold into smoke, but that he was the first man of whom she had heard who was able to turn smoke into gold. Such a story was likely to be repeated, and it is said that from the time dates the popularity of tobacco in England, which one writer says perfumes the island from John O' Groat's to Land's End. It was this popularity of tobacco that led Ben Jonson to write in one of his plays, "I marvel what pleasure or felicity they have in taking this roguish tobacco! It's good for nothing but to choke a man and to fill him full of smoke and embers; there were four died out of one house last week with taking of it; and two more the bell went for yesternight; one of them, they say, will ne'er 'scape it." It led King James, some years later, to write his celebrated "Counter-blaste against Tobacco."

Such are some of the thoughts that come to my mind as I think of the colony that was lost three hundred years ago. The next scene will take longer to tell of. Sir Walter Raleigh, whom one of his late biographers calls the founder of England's colonial empire, is the centre of it. I cannot stop to give you the history of his varied life, almost every important and interesting event in which is involved in obscurity or perplexed with doubt.

If you were to visit London now, you might read on a window of one of its churches these lines by our American poet, Lowell:

The New World's sons, from England's breast we drew
Such milk as bids remember whence we came;
Proud of her past, wherefrom our future grew,
This window we inscribe with Raleigh's name.

American citizens placed the window there in memory of the man who, though he never visited our shores, had predominant in his mind the founding of a colonial empire for our mother-country by wresting America from the grasp of Spain, which then held it or rather claimed to hold it.

What do we see, when we allow our imagination to carry us back to the brilliant days when Raleigh was one of the chief ornaments of the famous court of "England's manly queen," as Mr. Lowell calls Elizabeth? He is himself the first to attract our attention; a brave, accomplished young student from Oxford, whose mind was filled with romantic throbbings as he read the stories of the doings of Pizarro, Cortez, De Soto, and those other Spaniards whose boldness in American conquest was then the latest excitement. We should find him, I am sure, interested in the French efforts at colonization in South Carolina under Ribault, agent of Admiral Coligni, and with regrets at the tragic failure of the scheme. It was not many years after that event that Raleigh went to France

to fight for religious liberty (in a troop which he said was "wholly gentleman, wholly soldier") on the side of the Prince of Conde and the Admiral Coligni. After six years of such work, he was again abroad on a similar errand, a volunteer in the Netherlands, under the noble Prince of Orange. The student of the life of Raleigh is inclined to agree with that critic who asserted that Raleigh was "one of the most renowned and attractive, and in some respects the most remarkable in English history. . . . His mind presents a surprising union of strength and versatility, of intellectual and practical power, and of an observing, reflective, philosophical with a highly imaginative or poetical temperament."

Raleigh was skilled in mathematics, knew all that any one knew in that day of chemistry, was a brave and experienced soldier, spoke several languages, and knew the history and geography of the world.

Besides all this, he was a poet of no mean pretensions, the honored companion of Sidney, Spenser, Ben Jonson, Francis Bacon, Beaumont and Fletcher, Shakespeare, and probably of every other man of letters of any standing in his day. He was one of the famous company that is reported to have had its meetings at the Mermaid Inn in London, and his was not the least brilliant of the sprightly wit of that company.

Protestant though he was, Raleigh accepted the doctrine that had been fostered by the popes, that the unchristianized peoples of the world were without rights to any territory they might occupy, and it was on this principle that he proposed to take possession of all of North and South America that he could conquer, in the name of the Queen of England. Elizabeth was not willing that he should go in person on the expedition, as she had work for him to do on her side of the Atlantic, but she gave him a generous patent, entitling him to take possession of western countries and to plant colonies. The consequence was that he sent an expedition out in 1584, which discovered the shores of what is now North Carolina. The Englishmen were hospitably entertained and spent six weeks with the wife of the chief who ruled those parts. They then returned, taking home with them two of the natives and specimens of the products of the country. In their enthusiasm, they reported that the soil was the most fruitful of all the world, that the oaks were of many kinds and far better than those of England, that the fruits, vegetables, fish and game were abundant, and that the people were "most gentle, loving and faithful, void of all guile and treason," and that they lived "after the manner of the golden age."

Such reports, so verified, excited enthusiasm in England. The queen permitted Raleigh to name the new land Virginia, in honor of her; and also she made him a knight and gave him monopolies

to enable him the better to pursue the work of colonization which she rightly thought was to add to the lustre of her reign. The consequence was that a notable expedition was ready to start by the next April under command of Sir Richard Grenville, a cousin of Raleigh, as admiral, and bearing Ralph Lane, who was to be governor of the colony. Among the company was a scientific man of the highest rank, Thomas Hariot, who wrote an account



KEEPING THE AGREEMENT.

of his observations made during his stay in the country. This man was a staunch friend of Raleigh through good report and evil report all his life. He was the reputed inventor of our system of algebraic notation, and divides with Galileo the credit of first observing the spots on the sun and the satellites of Jupiter. The rank and position of the men who came with this expedition show better than words can tell the impression that had been made by the reports from America.

The squadron arrived at Roanoke Island in due time: that is, after a voyage of some three months' duration — and proceeded to explore the vicinity; but the guileless natives had found reason to change their attitude towards the invaders, and Grenville soon returned with a portion of the fleet, leaving Lane, however, who made excursions in

various directions; but he, too, was glad to take advantage of the coming of a fleet of Sir Francis Drake to return also, and they arrived at Portsmouth July 28th, 1586, "to the great glory of God, and to the no small honor of the prince, our country, and ourselves," as a narrator expresses it, though it is difficult to see in what the "honor" consists.

It was just after Lane had thus sailed for home, that a relief ship arrived bearing supplies, but finding Roanoke Island deserted, it sailed homewards. Two weeks later, Sir Richard Grenville brought other supplies, and failing in his turn to find the former colonists, he sailed back again, leaving, however, fifteen lone men on the shore to hold possession of the New World. Fancy, if you can, the condition of those fifteen men, as they stood on the sandy North Carolina shore, and saw the sails of the ships disappear from sight. We can only imagine their feelings, for no one ever saw them again.

Still the strong spirit of Raleigh was undaunted, and in 1587, he sent out another colony, under John White, and furnishing it with a charter for the city of Raleigh which they were to found. The first labor was to find the fifteen men left by Grenville, but, saving the whitened bones of one, and the huts grown over with vines, there were no vestiges of them. The savages reported that they had been attacked and killed, or driven off, a natural conclusion to a foolhardy venture. The fleet did not remain long, but leaving the colonists, White sailed for home to get assistance. He left behind him one person whom he had not brought, Virginia Dare, his granddaughter, born on the eighteenth of August, the first child of English parentage born within the present limits of the United States. Nine days after the little stranger appeared on the sandy shore of Roanoke, its grandfather sailed and did not return for three long, dreary years. He left with an agreement that if the colonists should change their place of residence, they would leave carved on the trees or door-posts the name of the place to which they had gone. Should they remove in misfortune, a cross, emblem of faith and heavenly succor, should be cut beneath the name.

Never was the truth of the proverb, "Man proposes, God disposes," more fully shown than in the events that followed. If you will turn to your English histories, you will get an idea of what John White found to be the state of affairs when he reached England. I suppose that, before he left home, he knew that Philip the Second was making great preparations to invade England, and perhaps he had heard that two or three weeks before he had finally weighed anchor at Plymouth, Sir Francis Drake had "singed the Spanish king's beard," as he expressed it, by sinking, burning, or capturing all of his shipping at Cadiz, and he may

have thought that Philip had been frightened out of his schemes. Probably he was not prepared to find all England stirred and thoroughly awake to the fact that self-preservation demanded all their exertions, and that not the smallest ship, or the most insignificant officer could be spared to prosecute discoveries, or even to carry succor to suffering explorers, who had gone to increase the glory of their country.

The summer of 1588 was crowded with the stirring events connected with the destruction of the Spanish Armada, and in these, Raleigh and Grenville were deeply involved. When, at last, danger from the Spaniards was at an end, Raleigh found himself so much impoverished that he was not able to fit out such an expedition as he wished. Did he find time even to think of the Englishmen that White had left on the shores of a vast continent? Did White think of them? Yes; the brave men were not forgotten. Two small fleets were prepared for the purpose of carrying relief, but the first was impressed by the government, and the second did not reach the colony, the men proving more anxious to fight Spaniards than to carry food to their own countrymen. Thus time wore on, and it was not until the spring of 1590, that Governor White was actually on his way towards America.

Shall we try to picture to ourselves the condition of the men on the Carolina shore from September, 1587, to August, 1590, when Governor White's ships arrived to look for them? Shall we sit with them on the low beach as they saw the ships lose themselves in the distance, the September sun shining upon their full sails, and try to realize the thoughts of home and wives and children that filled their minds? Shall we turn with them to the work that lay before them as the last vestige of the fleet disappeared, and they felt that the only link that held them to civilization was broken, and they among unfriendly savages? Autumn had already begun, and winter was soon to be upon them. What kind of a winter were they to expect in the New World? Little did they know. What preparation did they make for the future? Did they stop long on the island, or did they soon seek the mainland, as White supposed they would find it best to do? We know little of their movements. They must have ventured to remove, and that under agreeable auspices, and they carved on a tree the name of the place to which they went. That is all. They died. That little Virginia who, first of English children, drew her breath on American land, drew her last breath before three summers had been given her; but did she die of disease or of accident? Did an Indian hatchet cleave her young body? These are questions that never can be answered.

When White approached Roanoke Island, he saw, or thought he saw, through the gloom of nightfall, a light glimmering among the sombre

trees, and visions of happy meetings with the lost filled him and his men with enthusiasm. Alas, it was only to cast them into the greater sadness, for the most careful search, the most stirring trumpet-notes, served but to make the loneliness of the forest more desolate. No voice responded, and the break of day, that they had hoped would unite friends, showed them carved deep in the bark of a tree, the word C-R-O-A-T-A-N, the name of the place to which the colonists had retreated, perhaps from a winter storm, perhaps to find food, perhaps — but we can only guess what took them thither. The cross, to betoken distress, was not there. Had the flight been too sudden to give time to cut it? Books torn from their covers were found, pigs of lead and bars of iron, maps rotten with dampness, and a suit of armor almost

eaten up by rust, but no tidings of the lost colonists! From that day to this, now almost three hundred years, no syllable has come from the LOST COLONY.

Curiosity is piqued by a tradition among the Indians of the region that they had among their ancestors some who could "talk in a book," as the English do; and the gray eyes sometimes found among them give a slight ground for hope that the colonists lived, and were absorbed into the friendly tribes about them; but that is all. The lost colony furnishes another mystery, and gives a basis for further surmises as to the fate of a few more among the crowd of Pathfinders whose blood lies, like a sacrifice, at the foundation of the nation that has grown up on these Western shores.

IN CASE OF ACCIDENT.

BY DR. D. A. SARGENT.

III.

THE SKIN.

THE skin forms a thin, elastic covering for the external parts of the body. The outer surface, termed the *epidermis*, is tough, hard, and dry. The inner skin, called the *derma*, or true skin, is sensitive, soft, and moist. In case of an abrasion or irritation of the skin, a fluid is secreted between the outer and inner skin. This is commonly known as a blister. If the abrasion is severe enough to wound the small capillaries beneath the skin, this gives rise to a *blood* blister. If you touch your fingers to a hot stove, or lamp-chimney, you are made aware of the fact by a sensation of pain which is conveyed from the surface through nerves to nerve centres and the brain.

After exercising vigorously for a little while, you have observed that you got very warm, and that your body was covered with perspiration. If you ceased exercising while in this condition, and did not take the precaution to put on extra clothing, the temperature of the body would perceptibly fall, and you would take cold. Thus you see the skin is quite an important part of the body.

Its outer covering, by its hard and horny nature, tends to protect the more delicate parts from mechanical injury. The blood-vessels and sweat ducts by their timely contraction and expansion regulate the temperature of the body, and keep it constantly at the living standard. The sweat

glands secrete waste substances from the blood, and carry them to the surface of the body.

The nerve filaments notify the brain of the skin's contact with excessive heat, cold, or injurious substances.

Interfere extensively with any one of these separate functions and you would endanger your life.

It is by reason of the important duties which the skin has to perform that any accident or injury to its membranes should be treated with promptness and intelligence.

BURNS AND SCALDS.

Perhaps the most serious accidents which occur to the skin come by way of burns and scalds. As long as we are compelled to deal with fire and heated fluids accidental burning will take place, and it behooves every one to know what to do until medical service can be procured.

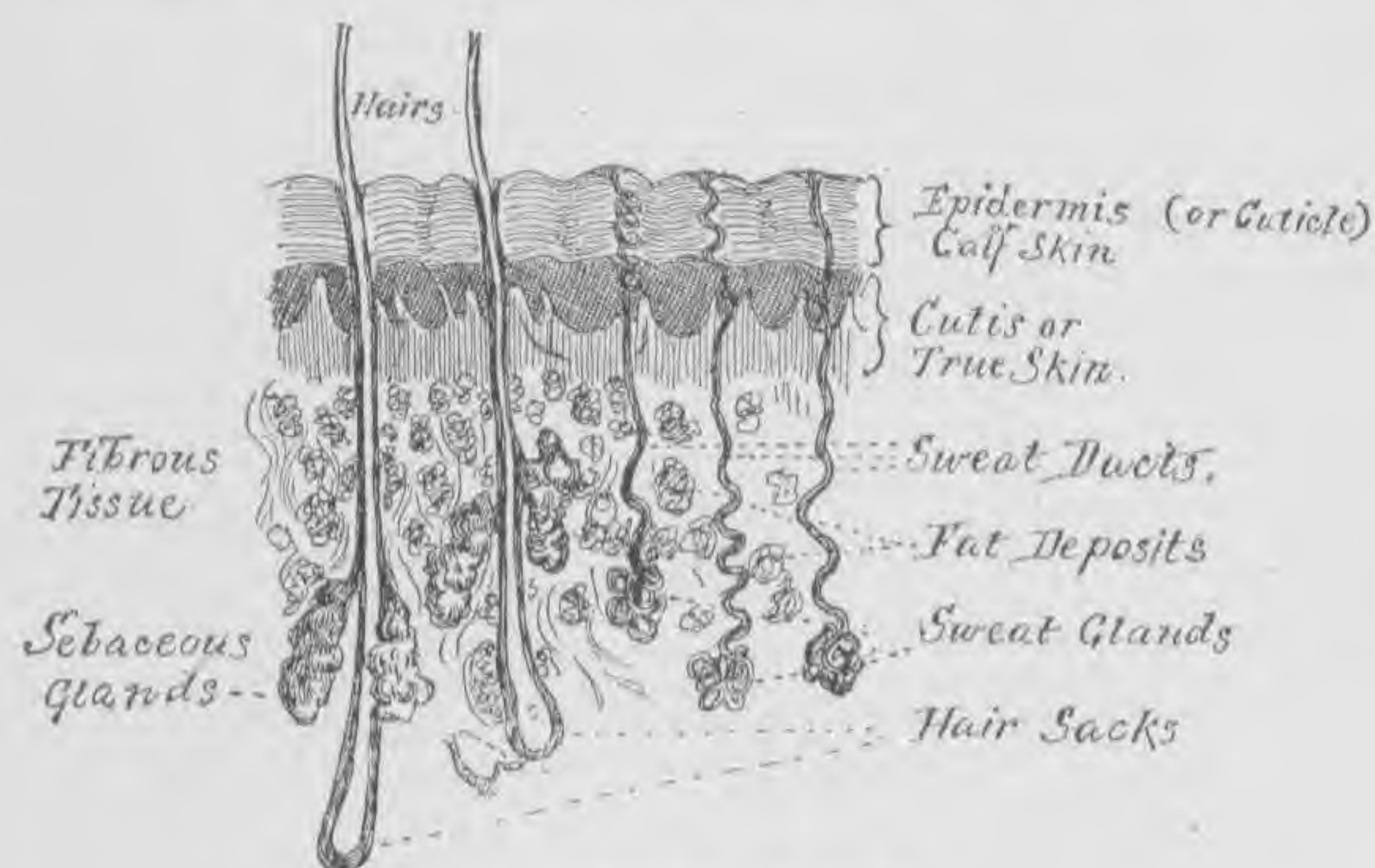
In case the clothes take fire, throw yourself upon the floor, and roll over and over as fast as possible. In this way you may be able to smother the flame by pressure.

If this accident should occur to another in your presence lose no time in getting him on the floor in a horizontal position.

If there is a mat, shawl, coat, or blanket handy throw them over the victim, taking care to tuck the covering around the neck, so that the flame and smoke will not be inhaled. Now press the covering over the body until you have smothered

the flame, then run quickly for a pail of water. Dash this over the body, and extinguish the smouldering embers before they have had time to eat their way into the flesh. This accident is most likely to occur to a woman or child, on account of the light and inflammable nature of their clothing.

The same treatment is applicable in either case. Prevent running about, protect the throat and



A SECTION OF SKIN.

lungs by placing a covering around the neck, roll on the floor, then drench the clothing with water.

As soon as the fire has been put out, take the sufferer into a warm room and place him on a table, or on the floor. Do not have too many in the room; three will do. Now get a pair of scissors, and begin to cut the clothing up and down the body and limbs so that it will fall off. Do not attempt to pull it off, or you will take a part of the skin with it. If any of the clothing clings to the flesh, let it remain, and cut around it.

If the blisters are very large, and seem likely to break, puncture them with a needle, and let the fluid escape, but do not remove the outer skin, or you will expose the raw surface.

If the doctor has not yet arrived, get some one to tear up all the old linen or calico which is accessible, dip these pieces into most any kind of oil which is at hand, and place them over the exposed parts. If there is any delay in getting the linen, anoint the burnt surface with butter, lard, or any kind of grease. If these are not at hand, powder it with flour or starch. Cream or oil mixed with lime-water may be used. Do not use cold water, if warm water is to be had.

As soon as you have removed the clothing and applied the dressings, put your patient in bed, first taking the precaution to cover the mattress with a water-proof sheet or oil cloth before putting on the under blanket and sheet. Cover the person with clothing enough to keep him warm and comfortable, and wait for the arrival of the doctor.

In case of severe scalding by steam or hot

water, drench the person as soon as possible with cold water, then take him to a warm room and proceed as in case of extensive burning.

BURNS BY LIME, ETC.

Are often more to be dreaded than burns by fire. The superficial skin is not only removed, but the soft parts beneath are often injured. The lime eats its way into the tissues, and destroys everything on its course. Being a strong *alkali*, the best way to combat its effects is by means of a diluted acid.

Vinegar, mixed with one half water, will answer, or lemon juice similarly diluted. Apply either of these acids freely over the surface where the lime has burned.

The same treatment is applicable in case of burns from soda, potash, ammonia, or any other alkali.

BURNS BY ACIDS.

Where concentrated acids (such as nitric, sulphuric or vitriol, etc.) come in contact with the skin, a severe burn with an ugly eschar is likely to follow, unless some remedy is immediately applied. To counteract the effects of the acid, use any alkali that may be at hand, such as soda, lime water, soap, or common earth.

In case of burns from acids or alkalies, use water freely, as every application will tend to dilute them and render them less likely to injure the skin and soft parts.

The after treatment is similar to that used for burns.

FROST BITE.

Next to scalds and burns, frost bite is most likely to occur, and to prove injurious to the skin and underlying parts.

When exposed to the cold for a long time, the blood is driven in from the surface and extremities, and the toes, nose and ears are apt to be frozen.

At the time the person may be unconscious of the fact, and it is possible to be frozen to death without being made painfully aware of the approaching danger.

In case of severe frost bite the person afflicted must be treated immediately. *Do not* take him into a warm room, but into a cold one. Remove the clothing carefully, so as not to break the limbs if one happens to be frozen. If there is any snow on the ground, rub the frozen part freely with it. If there is no snow, use ice water and wet cloths.

At the first sign of returning animation in the limb, the patient may be made warmer by an

extra sheet or blanket. Keep up the surface-rubbing all the time, and do not remove to a warmer room until the circulation is quite thoroughly established. Then warm cloths may be gradually applied, and stimulating drinks, such as cold tea or coffee, may be given.

Slight frost bites, such as often occur to nose

and ears, must be treated on the same general plan. The parts must not be warmed, except by very slow degrees. The necessary heat is best supplied by cold applications and gentle friction.

After the doctor arrives he will take measures to prevent the skin from coming off, or mortification from setting in.

LITTLE BIOGRAPHIES.—HOW SUCCESS IS WON.

BY SARAH K. BOLTON.

III.

JOHN GREENLEAF WHITTIER.

I FELT I was in the world to do something, and thought I *must*," said Mr. Whittier, speaking to me of his early years, as we sat in his home at Oak Knoll, Danvers, before a cheerful wood-fire. This consciousness of "must" is the secret of the noble life and noble work which has impressed the very heart of the American people. While no poet has sung more lovingly of our flowers, brooks and mountains, so no other has labored so heroically for the great principles of the American Republic. To free the slave, to give woman an equal chance in the world with man, to make the nations love each other and learn war no more — these are the once unpopular principles which he has fearlessly championed.

"But," says Mr. Whittier, "it is always safe to do right; and the truest expediency is simple justice."

Mr. Whittier, now seventy-six years old, is a tall, slender man, with dark, kind eyes, winsome smile, and gentle manners. The moment he begins to talk, his self-forgetfulness shows, and his kindness. Probably no one in this country has helped so many young writers, by kind words to editors, or by commendation of a first book. "I read a book with sympathy for the author," he says. "It is easy to tear a volume in pieces by criticism, but I try to find its merits." Many who have come up through struggles to success forget the great crowd of toilers below when they have reached the top of the mountain, but Mr. Whittier never forgets.

His boyhood was passed in Haverhill, Mass., in a lonely farmhouse half-hidden by oak woods, with no other home in sight. Here, he says, on stormy nights —

We heard the loosened clapboards tost,
The board-nails snapping in the frost;
And on us, through the unplastered wall,
Felt the light-sifted snow-flakes fall.

Besides a brother and two sisters, there were few companions. The father was a good Quaker, one of the selectmen of the town; the mother a refined, dignified woman, fond of reading the best books. She spun and wove the linen and woollen cloth needed in the family, always finding time to teach her children from the Bible. There were only twenty volumes in the home, most of these journals of Quaker ministers; and the only fresh book for the young boy was the yearly almanac! He longed for reading, especially for books of biography and travel; and whenever he heard of a volume, he would walk miles in the snow to borrow it.

When he was fourteen, his first schoolmaster, Joshua Coffin, brought a volume of *Burns* to the house, and read it aloud. Little John was delighted, begged him to leave it, and lo! forthwith began to make rhymes, and to imagine stories and adventures.

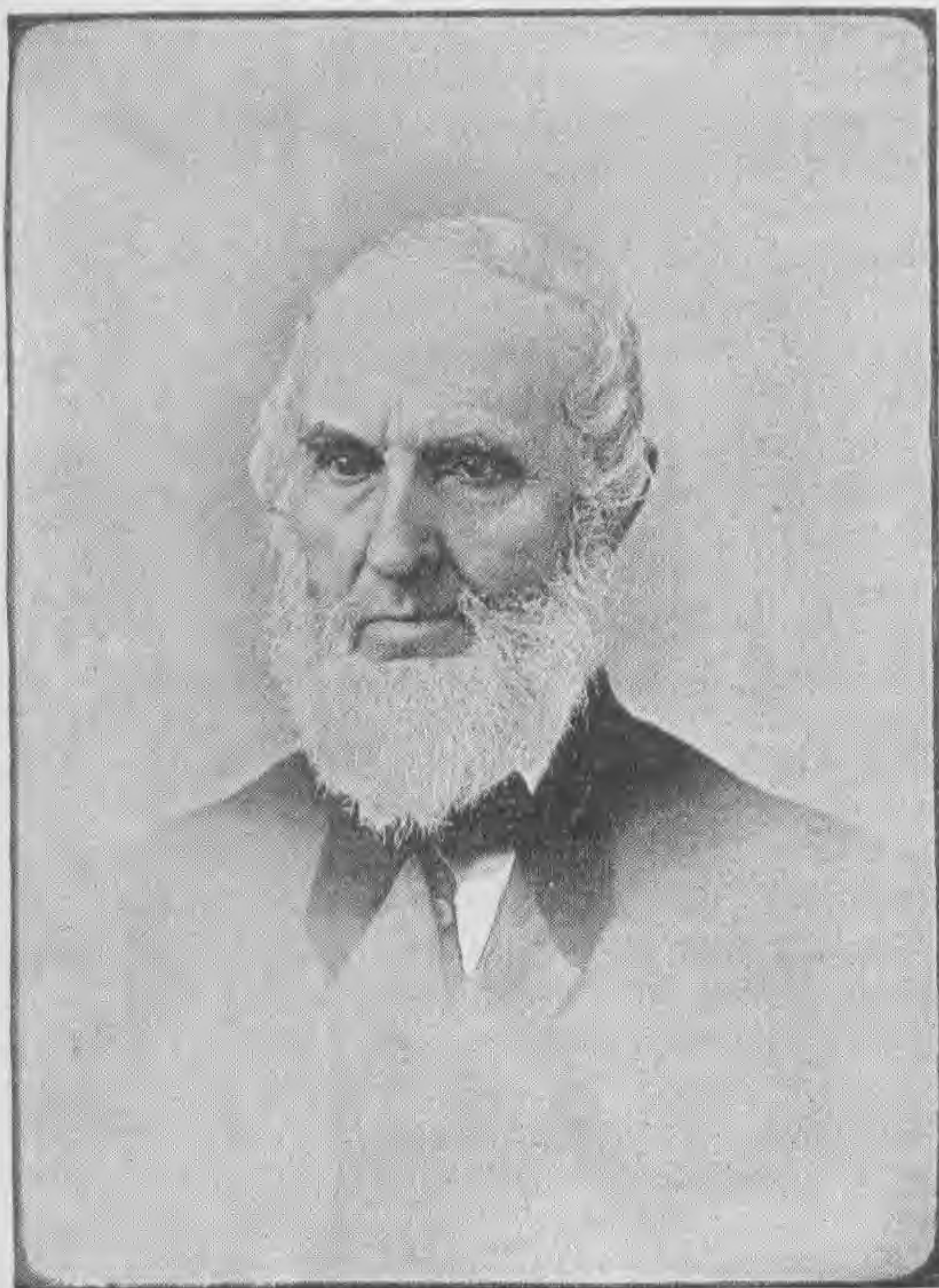
This is not the first time that a book has changed, or swollen the current of a life. Faraday would have remained a bookbinder, perhaps, if he had not read an article on electricity in a book he was binding. Robert Dick became the noted Scottish geologist from reading a book of Hugh Miller's. Between one baking and another, he often walked fifty and eighty miles, toiling at his scientific diggings and hammerings and spyings, with but a dry biscuit for food, which he moistened in brooks by the roadside.

Whittier's elder sister, Mary, encouraged him to write in the spare moments he could save from work on the farm, and errand-going for his mother; and, moreover, she sent one of his poems to the Newburyport *Free Press*, edited by William Lloyd Garrison. Says Mr. Whittier:

Some weeks afterwards, the news-carrier came along on horseback, and threw the paper out from his saddle-bags. My uncle and I were mending fences. I took up the sheet, and was surprised and overjoyed to see my lines in the "Poet's Corner." I stood gazing at them in wonder, and my uncle had to recall me several times to my work.

Dickens had a similar experience when, as he writes, "my first effusion, dropped stealthily one evening, at twilight, with fear and trembling, into a dark letter box, in a dark office, up a dark court in Fleet street, appeared in all the glory of print; on which occasion, by the by — how well I recollect it — I walked down to Westminster Hall, and turned into it for half an hour, because my eyes were so dimmed with joy and pride, that they could not bear the street and were not fit to be seen there."

Some time after this Mr. Garrison called at the farmhouse to see the young poet, who was at work in the fields, simply clad — like a true farmer boy — in shirt, pantaloons and straw hat. With beating heart he made himself ready to meet the editor. Mr. Garrison encouraged him, urging his father to send him to school. Young Whittier desired an education, but there was no money to procure it. "Where there is a will, there is



JOHN GREENLEAF WHITTIER.

always a way," and reflecting that the young man who worked for his father in summer, made shoes in winter, he followed his example, and thus earned enough to carry him through a six-months term at the Haverhill Academy. After making provisions for his board, tuition, and books, he had twenty-five cents left in his pocket! This he carried all the term, not spending a cent more

than he had planned at the beginning — and this instance of self-denial and self-control, really Spartan in a schoolboy, is surely a lesson in the art of success. He was popular at the Academy, for he was, even as a lad, wholly free from conceit, wholly free from egotism — two traits sure to be at once detected and despised by schoolboys. He had a fine, open face, then as now, was witty, somewhat shy, did not talk over much, and was very courteous. His memory was retentive, but from the very first he formed the habit of storing information in note books.

At the close of the term, he taught a school, and thus earned money for another six months at the Academy. After this, for some months, he edited a paper called the *American Manufacturer*, his salary being nine dollars a week; but presently we find him again at work on the farm, and writing whenever he can find time. How little there seems, at first glance, in such a life to inspire rapt or tender moods for the making of verses. His impulse was surely inborn, and from forces and fires of his own nature. Young Longfellow had literary friends with whom he could take counsel. Whittier had only his devoted sister. He still owned few books, still had little money, and was troubled and depressed by poor health. However, he worked constantly. We find him next invited to Hartford, to take charge of the *New England Weekly Review*, in the absence of the editor, George D. Prentice, afterward so well known in Kentucky. The young Quaker editor showed his sense of high-toned journalism by refusing to engage in personal bickerings or controversies, then the fashion of newspapers. After a year and a half of this life he was called home by the illness and death of his father; and again he "put his hand to the plough," literally, supporting his mother and sisters by labor on the farm, one and all working "to make both ends meet." But if this life was hard it was mellowed by the tenderest home affections. Elizabeth, the younger sister, now wrote poetry, too, thus rendering the companionship more delightful, and already fame was busy with the name so dear to her now these long years.

Garrison, meantime, poor, setting his own type, and sleeping in his office, was editing the *Liberator*, and persistently demanding the unconditional surrender of the slave. He had been imprisoned and insulted by the great, mobbed by the ignorant, yet still he kept his eyes on his motto: "I will not retreat a single inch, and I will be heard!" Young Whittier, loving freedom as dearly as his friend Garrison, at last resolved to give up his projects of literary eminence, and join the "despised abolitionists" instead. He wrote and published with his own hard-earned money, an able pamphlet concerning slavery, of which Lewis Tappan of New York, presently had ten thousand copies

printed, to be distributed broadcast. It is not at all surprising to learn of a young man so fearless and so true, that he was a delegate to, and secretary of, the first National Anti-Slavery Convention at Philadelphia, in 1833, when he was but twenty-six years old, and that two years later he was a member of the Massachusetts Legislature. However, few journals desired his ringing poems now. Editors drew back appalled at the impassioned outcries for liberty, for action in behalf of the oppressed four millions of fellow-men.

Soon after this, appearing at Concord, N. H., with George Thompson of England, an eloquent anti-slavery speaker, the twain were mobbed by two or three hundred persons, severely bruised with stones, and barely escaping with their lives. Yet the fearless young Quaker soon went on to take charge of the *Pennsylvania Freeman*, at Philadelphia. There his office was broken open by a mob, who carried his books and papers into the large hall of the building, set fire to them, turned on the gas, and then retired to watch their wild work go on, till the building lay a smouldering ruin. For a year longer he worked on the paper, till failing health compelled his return to the farm, but not to silence, or any abandonment whatever of his aims, although he had seen a mob, led by "men of property and standing," drag his old friend Garrison through the streets of Boston, with a rope around his neck, and rescued by the police, only to be thrown into jail.

In 1847 Mr. Whittier became the associate editor of the *National Era*, in which *Uncle Tom's Cabin* was printed as a serial. For this paper he wrote nearly a hundred poems. Ten years later, when the *Atlantic Monthly* was established, he was one of its ablest writers. All these years he had earned little money, but he had won enduring fame, and everywhere was revered as the champion of every man's inalienable rights. Certain literature may be popular for a time, and find a large sale, but only that which is written to elevate the world, has within it enduring life. Dicken's books are sure of permanence, because in them he showed the rich how wretchedly the poor are housed and fed. Victor Hugo's works will not cease to be read, because they are, one and all, impassioned pleas for liberty and justice.

Whittier's mother died in 1857, having lived to see her son come to his fame and honor. She knew that his voice had thrilled thousands of hearts; and she also knew there must be later a glorious outcome in the nation's life, from his fearless work. To the last, the devotion between mother and son was beautiful.

There has been a glorious outcome. And the poet of high courage, and deep tenderness, singing always in clear, true keys, has gone on his way from honor to honor, along peaceful and sunny heights now for many a year. On Mr. Whittier's

seventieth birthday, Mr. Houghton, the publisher of the *Atlantic Monthly*, gave a dinner in his honor. Emerson and Longfellow, Holmes and Howells, came with tender greetings, while from Lowell, Bryant, Stoddard, Aldrich, and many more, letters were read. The once "barefoot boy" was hailed the poet of the American people. Whittier's life is beautiful with the happiness of noble aims fulfilled — a life that has hinged always on that brief law, "*Dare to be true!*" Unmarried, the world has wondered if, like Washington Irving, he did not cherish the memory of some fair, sweet face. An article having appeared some time since, in a Western paper, stating that a lady, recently deceased, was the one whom Whittier loved, the poet wrote a letter to the editor, saying that the article was very interesting, but somewhat imaginative, as he had never seen the person mentioned since she was nine years old. But doubtless the poem *In School Days* was written from the heart:

He saw her lift her eyes; he felt
The soft hand's light caressing,
And heard the tremble of her voice
As if a fault confessing.

"I'm sorry that I spelt the word;
I hate to go above you,
Because" — the brown eyes lower fell —
"Because, you see, I love you."

Still memory to a gray-haired man
That sweet child face is showing.
Dear girl! the grasses on her grave
Have forty years been growing!

He lives to learn in life's hard school
How few who pass above him
Lament their triumph, and his loss,
Like her — because they love him.

"I have gotten a great deal out of life; more than most people," he said recently. When I spoke of the early struggles, here recounted, he replied, "I did not covet what was beyond my reach. I try to remember only the bright and good," and added, playfully, "I have forgotten all the mischief I did." He recalled to me the lines in *My Birthday*:

Better than self-indulgent years
The outflung heart of youth;
Than pleasant songs in idle years,
The tumult of the truth.

He lives in Lincoln's memorable words, "with malice toward none, and charity for all;" — he is an outspoken proclaimer of total abstinence; never uses tobacco; he is modest, self-deprecative; yet thankful for his poetic gifts. Still so devoted to principle is he, so brightly yet flames the early fires, that he says, "I set a higher value on my name as appended to the Anti-Slavery Declara-

tion of 1833, than on the title page of any book."

Thirty-six different volumes have been issued of Mr. Whittier's work; among them biography, essays, and a historical novel, *Margaret Smith's Journal*. For many years now, he has not been able to read or write for more than a half-hour at a time, yet he still accomplishes much.

Although Presidential Elector in 1860 and 1864, voting for Mr. Lincoln, and one of the founders of the Liberal Party, the early form of the present Republican Party, he has refused to participate largely in public life. He says, "I have always taken an active part in elections, but I have not been willing to add my own example to the greed of office." He has been a member of the Board of Overseers for Harvard College, and a Trustee

of Brown University. He is greatly loved by his townspeople, both at his home at Amesbury, and in Danvers. His books furnish a comfortable income. He is genuinely fond of children and of animals. When I saw him last, his dogs came to welcome me, one holding up a bruised paw for sympathy, while the mocking-bird talked so much louder than both of us, that Mr. Whittier was obliged to cover his cage. Such a life of cheerfulness in toil, of perseverance, such an example of unselfish allegiance to duty, such an instance of noble success won through utter devotion to high principles, is a rich legacy to the children of our country. Some one has well said, "The most valuable gift of a man or woman to this world is not money nor books, but a noble life."

ANNA MARIA'S HOUSEKEEPING.

BY THE NEXT NEIGHBOR.

XV.

A SCREW LOOSE.

YOU wanted me, Anna Maria, to go over things this morning, and decide what was best to do with them before spring cleaning. You are thinking about draperies and toilet mats, the mantel screens and corner brackets, spring dresses and Kate Greenaway aprons, with all the pretty devices a girl runs over in her mind. You want the house and its belongings just as bright and pretty as it can be with what you have. The only trouble is you don't know where to begin.

There is a story of a man who had an ambitious wife, who used to say he wanted to be rich, and his wife declared she only wanted to be "comfortably off; but he would be rich a long time before she was comfortable." Everybody wants to be artistic now where people used to be content with being comfortable. Yet I've seen plenty of folks who thought their houses artistic who would never be in reach of comfort. We will make sure of the comfort first, without leaving taste out, and I think in going over the house, we will begin at the front door.

Do you notice how loose the knob is, how it swerves in your hand as you try to turn it, and how Charlie has to twist and turn the handle two or three times in his little red-mittened hand before the door opens, when he comes from school in a hurry; and what a sense of irritation it gives

one every time he or she takes the ill-conditioned thing in hand? One of these times it will come off, and there will be a day's bother for the family before it is repaired. Put a stop to all this vexation at once by finding a screw-driver and fastening the loose bolt. Life is too short, too full of better things, to have its energies wasted by such petty fret and hindrance. The time is nothing; the annoyance repeated five or six times a day for weeks is something serious in the end. Yet how many families endure such annoyances for a whole season for want of two minutes' work with a common tool, which any schoolboy or girl should be able to do.

The screw is gone? Now, you remember, you swept it up last week and threw it into the fire, thinking it wasn't worth saving. You can buy a dozen such screws for five cents, and it wasn't worth the trouble of picking up that one. Beside, if you did, it would only lie around on the mantel or window sill for weeks, and be in the way every time you dusted. You hate uninteresting trash about a house. The boys are always picking up nails and bits of lead or tin, and the consequence is that windows and shelves are decorated with such rubbish. You don't mind saving, but you don't like the litter it makes.

I sympathize with you entirely there. I knew a family where the father was punctilious about saving every nail, every scrap of string, every sheet of paper that came into the house, and I know what a burden he made life to his womenkind who liked

neat ways, and were always troubled to put away his nails and bits of wire, the nuts and rivets, the tags and strings by which his presence through the house could be traced. This fashion of saving made me hate the very idea of being careful, or of keeping little things; and it was not till I had a house of my own that I learned how valuable trifles can be, and that not the saving was to be dreaded, but the disorder. You want not only to save, but to know how to save.

For want of that tiny screw to the doorknob, you will have to find Willie, see that he is neat enough to go down town, and send him to the shop for a paper of screws. As Willie is with the rest of the boys, watching the ice break up in the river, and will have to change his boots when he comes home, and get you to sew a button on his coat, and you will have to see that his face is clean, his hair brushed, and his mittens on, and he will have to bring back samples of screws before you can get the right size, I think you will agree that it would have been less trouble to save the screw in the beginning; better still to have tightened it as soon as it came loose. But while you wait for the screws, let us provide against such awkwardness happening again. I want to give you a charm against all litter of nails and strings, all losing of screws, loss and breakage of every sort, as far as mortal can prevent. You want a light wooden tray—an old kitchen knife-box, or quarter-box for raisins will answer—with handle in the middle, and small partitions in the sides to hold things of different sizes. Have the tray finished as nicely as you can, scrubbed with sand or sandpapered, all roughness smoothed, and cracks filled. Last of all, finished with oil varnish which will not chip like spirit varnish. A neat tray that you don't object to handle is more likely to be used than a rough, grimy box no one wants to touch. In this tray you want tools: a claw-hammer large enough and heavy enough to drive a ten-penny nail, and let me tell you, though you are a girl, it is easier to drive nails with a hammer of some weight than with these foolish light tools sold "for ladies' use." Next, you need a common screw-driver, such as comes with sewing machines, and costs five cents; a larger one for obstinate screws, twenty-five cents; a gimlet for boring holes, five cents; two files, one coarse, one fine, the two costing twenty-five cents; a handsaw, fifty cents; and a good jack-knife worth twenty-five. You have a hatchet with broad blade already—as most families do—but is it sharp? If not, the kitchen grindstone will set that right. Add to these, if you choose, a kit of soldering tools, which come for women's use in a neat wooden box for fifty cents, iron, scraper, solder and resin complete. Also a glue-pot and two wooden clamps at five cents apiece, and you cannot only save the cost of repairs, which is the

least consideration, but also the waiting for things which need mending, and the vexation of careless workmen and slighted work. Things have come to such a pass now that the ordinary workman will often refuse to mend a thing at all, preferring you should pay the price for a new one. As he says, "Not wanting to be bothered with repairs." I have taken my French coffee-pot to the shop to have a trifle of soldering done which would restore its usefulness, and the tinman refused to touch it. He would sell me a new pot, price two dollars and fifty cents, but he would not do twenty-five cents' worth of work on the old one. "It was too much bother to do small jobs."

I did not give up my coffee-pot, which made such incomparable coffee, but waited until I found an old-fashioned tinner who for thirty cents gave back the pot ready to last longer than a new one. It often happens that the first of any convenience manufactured, especially of patent articles, are much better made than any after, and you have better wear from an old thing mended than from a new inferior one.

Don't tell me you can't use a soldering iron or a saw. I know a dozen women as clever with such things as their brothers. If you don't know how at first, you can learn by practice; and you may as well do your own bungling and botching as pay workmen for it, and most of them botch repairs anyhow. There is nothing in the ordinary repairs of a house, in tin, wood, or iron, painting or puttying, which is not as easy for a girl or woman as half the work which falls to her proper share. For instance, the door of a closet sticks, and every time it is opened you must work and coax it, bear down on the handle or kick the panel before it will budge. I have seen families worry with a door for years without the energy to put it in order. You can see by the mark on the floor or frame what the matter is. The door needs planing off the eighth of an inch on some corner. The best way to cure it is to take it off the hinges, and have the edge planed true; but this is too heavy for you, though I have seen a slender woman take a door down, trim it with her jack-plane, and put it up in less time than one could send for a carpenter. You can remedy the trouble in an humble way by paring the corner carefully with a sharp knife, and rubbing it smooth with sandpaper. A window rattles at night, disturbing the sleep of every one near it. Whittle out two small wedges of hard wood to fit between the sash and window-frame, and the clatter is stopped.

But the question is where to find a bit of hard wood when wanted. An old slate frame was burned up last week of seasoned maple, just right for such uses. The odd block from the baby's old set would do, but that was burned too. Better keep a box to save such things. A window shade hangs awry, a distress to sight, and to the hand of

any one who wants to pull it up. Usually such things hang till the shade is half ruined. Take it down at once. Your fine screw-driver pries out the little nails easily; the little clamp which screws on the table holds roller and holland straight at one end, while you tack the other with your sure-headed hammer. A tiny rivet is wanting for the roller cap — somebody brushed it off the window sill when it fell, and thought no more about it. You can't get such a rivet short of the factory where the curtain fixtures were made; dealers do not keep them. You must put up another socket. There has been one calmly rusting on the wash-room window these three months. What a rusty, disagreeable object to touch! Boil it in your lye-can a few moments; it comes out clean and bright. The screws have worn the wood in the screw-holes, because somebody tried to pry them out with the hatchet, like nails, the last time the shades were taken down, instead of unscrewing them. Use a size larger screw. Where to find them? It seems to me that for three months I have seen screws, nails, rivets, wherever such things ought not to be — on the kitchen mantelpiece last week, on the flower-stand week before, on the window in Willie's room, or the sidelight in the hall where he tucked them before darting out to play. Of course they are not to be found now. But I'll tell you where they ought to be after this — in one of the compartments of your tray, where every such thing as a fixture, or part of a fixture, should be kept, together with tacks, brads, nuts, and all the things which are useless till they prove invaluable.

To gather these things is the use of those handy modern articles known as catchalls. Every room in the house should have one of these. A cigar-box, decorated, makes a good one to stand on the mantel and receive odds and ends, from pens to nails, old keys, bits of metal, or hard wood, waste paper, rags and strings going into a waste-basket fanciful enough to disguise the litter it contains.

Nobody wants to run to the kitchen closet and work tray with every nail, or bit of rubbish, but it is dropped in the little carved catchall and nobody the wiser till the end of the week, when all these receptacles are to be emptied, contents sorted, and each kind go to its own place, the rags to the big rag bag in the stair closet, the hardware to the scrap tray where nails of one size drop in their division, screws in theirs, nuts and bolts in their own, and pieces of seasoned hard wood go in a box by themselves, ready for the boys' jack-knives or your "Boston knife," when wanted. The use of tools will teach you the worth of such material. Have a place for it, with convenient catchalls to receive house litter, and you will find that it is better to keep a thing a dozen years till you want it, than to once want it, and be without it.

So, when Willie splits up the store boxes for kindling, teach him to draw out all the long, slender nails first, and put them away, because such nails are best for holding boards together, and are not commonly sold. That bit of hoop iron will serve to brace your trunk when it begins to gape at corners. Those little, long nails from the raisin-boxes are the only ones to tack the corners of trunk trays so that they will hold, and hold all the better for being bound with that thin brass off a foreign package you were just going to throw away. Willie wants new partitions in his insect cases. He can whittle them out of the soft wood of broken clothes pins. Or he wants to line his rabbit hutch so the inmates cannot gnaw their way through. Bricks are out of the question, but tomato cans are not. Heat them, when empty, till the solder melts, and the ends drop out, when you have square pieces of tin which need hammering or rolling flat to fit them for lining or roofing small pens. Any boy can nail these pieces around the lower part of a rabbit pen or chicken house, making it both rabbit and rat proof. And this is one of a hundred ways in which rubbish can be turned to use.

WAYS TO DO THINGS.

BY EDWARD DEWSON.

XVII.

A BOY'S "CATCHALL," OR HANDY CASE FOR BOOKS, BUGS, BATS, BALLS, ETC.

THERE is no better way for a boy to spend his evenings, half-holidays, and vacations, than in making some useful and pretty articles of

furniture for his own room, providing he has an aptitude for such work, and the mechanical ingenuity and natural patience to do it with neatness and accuracy. Yet a boy should not — if he takes pleasure in such work — become discouraged if his first attempts are not wholly attended by success, as no success comes without perseverance; and perseverance, if the love for the work be not

wanting, will inevitably bring its own reward.

The average boy is not usually blessed with overmuch room in which to bestow his many treasures — his bats, balls and marbles, his collection



SKETCH NO. 1.

of butterflies and bugs, relics of many a pleasant tramp through field and wood, and last, but far from least important, the treasured books of tale and adventure, so dear to the heart of a genuine boy; therefore the little case or cabinet of the illustration has been contrived, for his own making, as a resting-place for all these and more, and to prove the happy truth of the old adage, "A place for everything, and everything in its place."

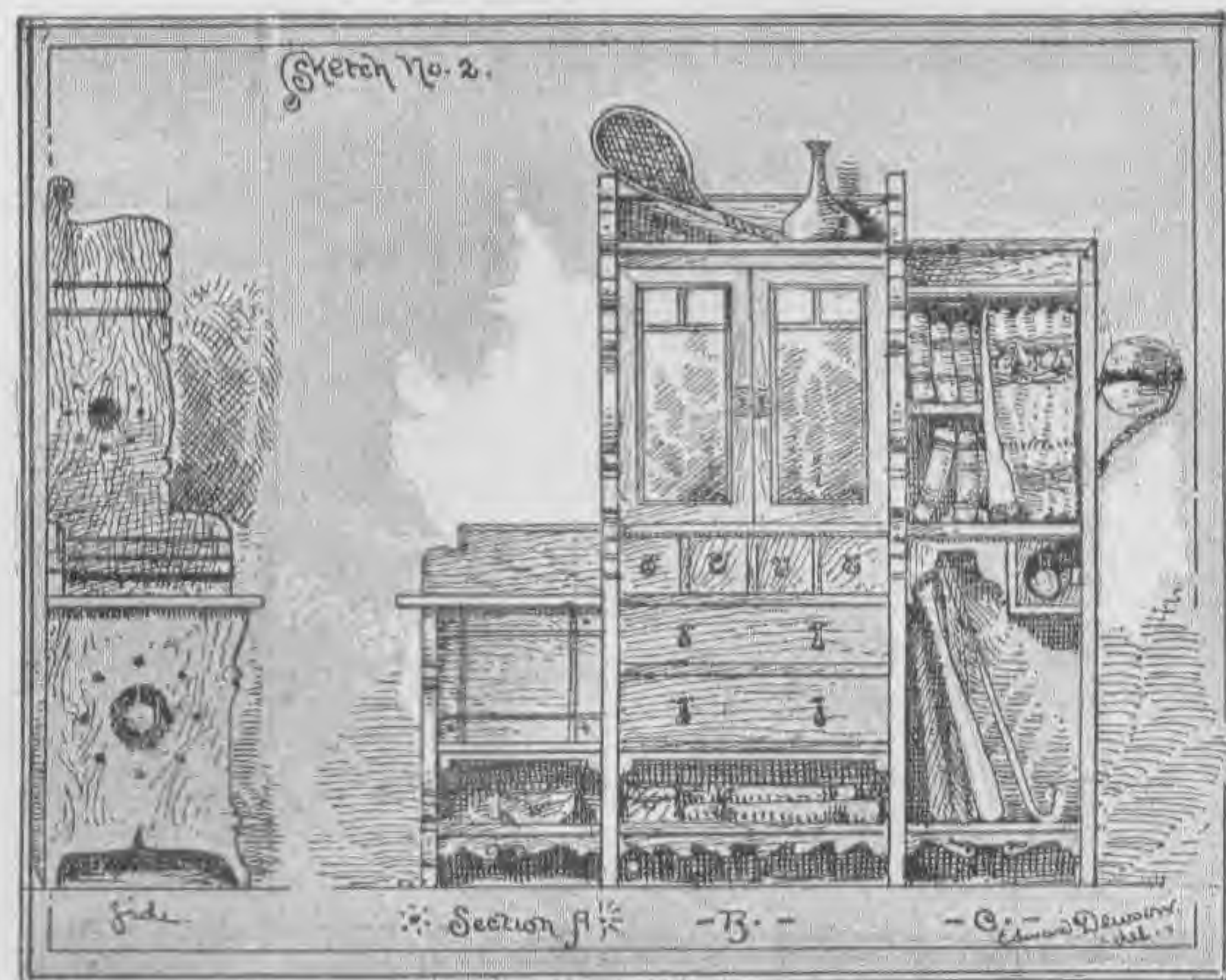
It may be constructed of nicely-selected pine, for this is easily obtained, is cheap, and any little mistake will not entail too much expense if the work has to be done again, and also it is easily worked, and takes a beautiful golden color when "filled," and finished with shellac. Pains must be taken not to mar the wood with tool-marks. To make a nice piece of work, you will not use any nails, but put the case together with dowels, screws, and glue.

Now look over the drawings together. *Sketch No. 1* shows the completed case as it should look when finished and in place. The first section, *A*, (*Sketch No. 2*) is a fair-sized box with lifting cover, and a shelf beneath. This will be found handy for many odds and ends of boyish treasures too cumbersome to be stored away in drawers and boxes. *Section B* contains the specimen, or butterfly case, with a row of small drawers below,

these drawers being handy receptacles for marbles, tops, twine, or like odds and ends that make a troublesome litter when thrown together in a large drawer. Two large drawers below these, and the shelf, will find their uses, without doubt. *Section C* has a couple of shelves for books, with storage room for bats, hockey sticks, etc., below; and in one corner is a small box large enough to hold two or three balls; outside of this, as the other plans will show, is a receptacle for a foot-ball, made of bent wire. This, if not a desirable addition, may be left off.

Having looked our case over in a general way, let us now go into the details of construction and finish. In *Sketch No. 2* will be found all the general measurements. The figuring and lettering on the *Detail Sketch* all refer to this drawing. We will first get out the stock for the side-pieces of the various sections, four in number, and two of them — those belonging to *Section B* — of exactly the same size and shape. These should be of one and one fourth inch stock, and of the dimensions given in *Detail Sketch No. 3*. Mark out carefully the simple outline indicated for each piece, using a piece of charcoal, so the line may be easily wiped out and corrected if unsatisfactory. Go over the corrected outline with a soft pencil to preserve them, and then saw them out. This must be done with care, to keep the edges even and true, using either a draw tool or small saw on the finer outlines.

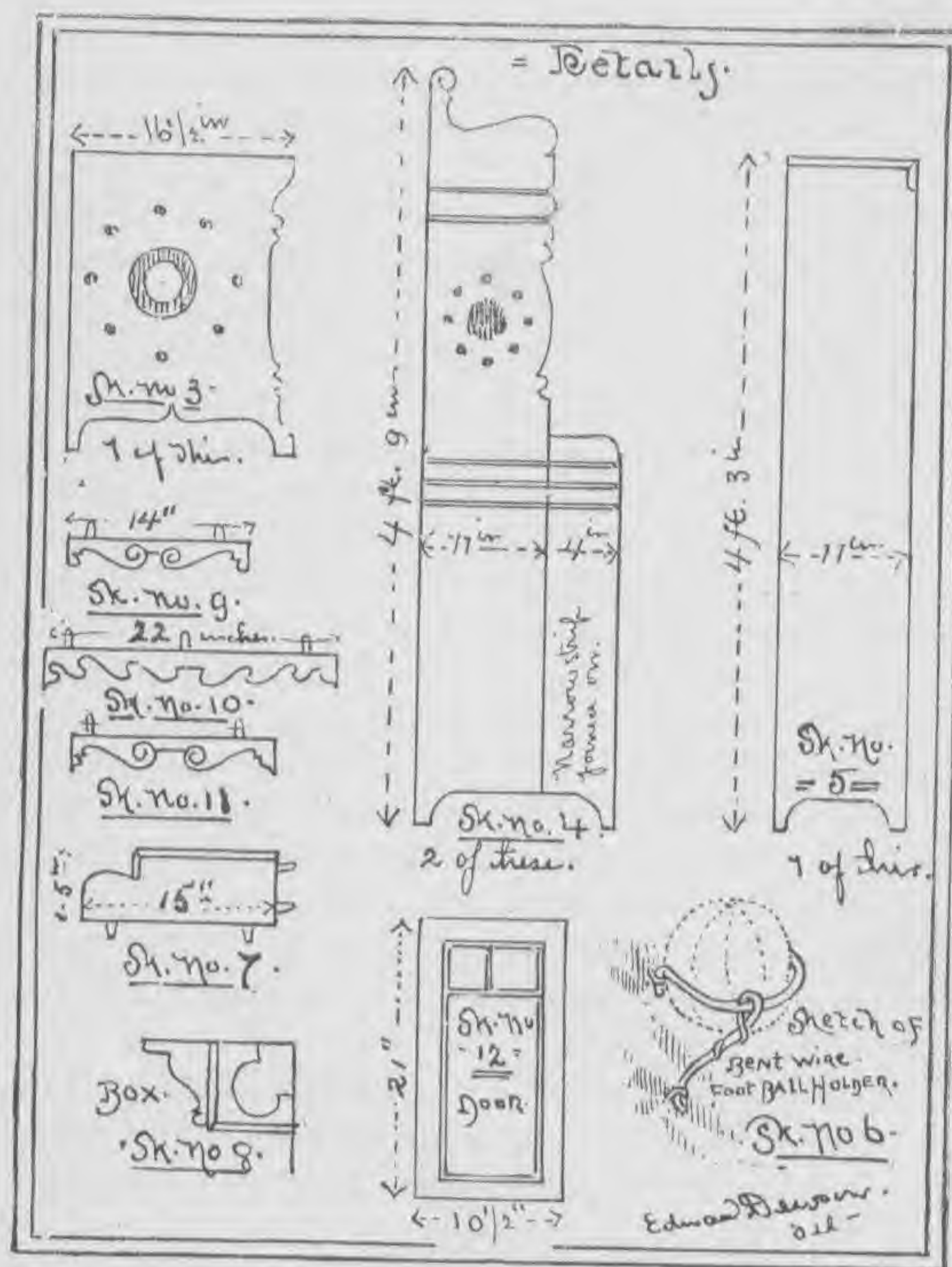
The half-trefoil on side of *Section A* at the bottom should be drawn with a compass, or scribing tool, and cut with a hand scroll-saw; and the sim-



SKETCH NO. 2.

ple pattern on the sides should first be marked out with a compass, the larger hole carefully cut out with a sharp tool to the depth of one fourth inch. The smaller holes, surrounding it, bore out to about the same depth with a small auger-bit.

The straight line decoration on sides of *Sections B* and *C* are first neatly lined with a pencil, and then cut with a sharp tool, one fourth inch wide, and about as deep. The cover of *Section A* should be of seven eighths inch stock, and should project fully an inch over the side and front. The back piece, on which the hinges are fastened, should be



SKETCH NO. 3.

two and one half inches wide. This will allow ample room for the back board, and give to the cover, when open, sufficient slant to lean easily against the wall. This piece should be well glued and doweled into place, and two neat brass hinges set in, to hold the cover. The bottom of box and bottom shelf of this same section are of same thickness as top, firmly doweled and glued into place. The front panel is of same thickness, and cut to fit exactly into place, doweled and glued. The small jig-saw patterns at bottom of *Sketches No. 8, 9, 10*, are cut from one half inch stock, and glued on firmly. *Section A* is now ready to attach to the side piece of *Section B*. This must be neatly and firmly done with dowels and glue.

In *Section B* first get out the top, centre and bottom shelves, as well as the narrow strip division for the drawers; these last need not run back more than three inches, excepting for the row of small drawers. This division should run entirely from front to back, the same as the shelves. The

thickness of all the shelving is the same throughout. Having framed together our sides with the centre and bottom shelves, and drawer partitions, next place the two narrow uprights, on which the doors are to be hung, in position. These are one half inch wide and firmly doweled and glued into sides; the doors are hung with simple brass hinges and made to lap one over the other on one fourth inch rebate, and shutting against an upright post about three fourths inch square. Glue a strip one inch wide and one half inch thick around the sides and back piece, for the top to rest upon and be fastened to, by one fourth inch dowels, and glued; this strip should, for further security, be fastened by a number of small screws. Space will not allow the details of construction of drawers; but if the lad will look at any well-made drawer, he will easily find out for himself.

We have already got out the side for the book shelves and bat holder, *Section C*, and have only to dowel and glue shelves firmly into place, put the back boards in position, having got them out the size and shape shown by *Sketches 7 and 8*.

Now our case is well framed together and it only remains for us to finish various small details. After fitting a one fourth inch shelf into the specimen case midway, the next move is to line the whole of the specimen case and the two long drawers beneath with thin, flat pieces of cork about one eighth inch in thickness. First apply to the whole surface to be covered, a thin coating of hot glue, fitting in the piece of cork while the glue is hot; rub well into place, and apply an even pressure, to be left until the glue is thoroughly "set;" when this is done cover all the cork with nice white paper, applied with flour paste. Frame up the door as shown in *Sketch No. 12*, of one half inch stock, setting the glass in from the front into a narrow rebate. Then glue a narrow moulding on the outside to prevent the glass from falling out. Hang the door with brass hinges and fit a small lock into place; then dowel neatly into place the under brackets, *Nos. 9, 10, 11*, in their respective positions, place pretty brass pulls on all the drawers, and the case is nearly ready for finishing.

In the book case *Section 6*, the simplest way of arranging the shelves is to bore a row of one fourth inch holes front and back and at both sides, and fit little pegs into these for two shelves to rest on. These may be raised or lowered by changing the positions of the pegs. Make a little box as shown, of one fourth inch stock, fasten this neatly with small screws into the left-hand upper corner of the bat holder under the lower shelf; this is to hold the base and hockey balls. The back of the case may be made of narrow strips of one fourth inch sheathing, held in by screws.

Fill the woodwork thoroughly with a good filler; Wheeler's is good. After it is wholly dry, go over the case with a good coat of white shellac, and

when dry, rub it down carefully with powdered pumice stone, oil and emery cloth. A second coat of shellac carefully rubbed down, will result in a rich golden brown hue, that will improve with age. This case, when complete, will cover a small space of four feet nine inches by three feet three inches.

In buying stock, select the best pine for all portions that will show. Get the stock well planed and smooth it down.

If made by a carpenter, twenty-five dollars would be the smallest payable price for a good job, so that the price named is not at all excessive for a really good thing.

This case being somewhat elaborate is intended both in design and instructions here given, for those boys who have a fair knowledge of construction,

and some ideas as to the best way to set about it; and it must be borne in mind although pine is soft and easily worked, it is also easily soiled and injured by tool marks more readily than the harder woods.

The general schedule of material and cost given below will be found useful in buying.

SCHEDULE OF COSTS, ETC.

50 feet, 7-8 inch pine, { at 6c per foot,	\$4.50
25 " 1-2 " }	
Sawing, if done at a mill, about	1.50
Finishing and filling the wood in four coats, about	
1 quart of shellac, etc.,	1.50
Hardware, locks, hinges, drawers, pulls, etc., etc.,	1.50
Glass for doors,	.50
Cork, paper, glue, etc., about	1.50
Total,	\$11.00

WHAT TO DO ABOUT IT.

ETHEL S. "Please tell me how to clean bronzes. My sister has a pair of bronze statues with ebony bases, and while she was in New Orleans the chambermaid put a piece of cocoa butter on one of them, not knowing that it would soil it, and she also wiped it off with a wet cloth." If the articles are really bronze, take the grease out with magnesia, or weak soda water, and a sponge, rinsing with beer; then restore the color with bronze powder of the right shade, which you will find at a metal worker and burnisher's, or at a large paint dealer's. If the articles are imitation bronze, touch the spot with alcohol or wipe with yolk of egg, and apply bronze powder.

MAGGIE. "Will horse hairs kept in water become snakes?" No; a small snake closely resembling a hair, with no head or tail to be seen without a magnifying glass, is found in streams and springs, and has raised the belief that it sprang from a hair, which in some mysterious way became vivified.

QUIZ. 1. "A week or two ago the boys at school brought in some little frogs from a shallow pond, which were about the size of a three cent piece, smaller than any little toads I ever saw. Now, I thought all frogs developed from tadpoles, and find nothing to the contrary in an encyclopædia. Can you tell me about them?" Frogs sometimes pass the tadpole state in the egg, and are hatched perfect, especially when they have been exposed to drouth. Are you quite sure whether it was a frog or a toadlet that the boys found? Young toads are extremely small.

2. "What will prevent the skin from growing tight to the base of the finger nails? In trying to

loosen it, I make it rough and homely and sometimes make a rough place in the nail, which is a long time going off. If I let it be, it cracks at the side and is sore." Cut the ragged skin away with sharp, fine scissors, and rub the nails and finger joints with vaseline or olive oil, before going to bed. Repeat every night and morning till healed, then daily in drying the hands, press the skin from the base of the nails with the forefinger nail or a tiny ivory knife for the purpose. The cracking and soreness shows an irritable condition of the blood; using the vaseline will soon improve the nails. You can remove roughness by polishing them with fine emery and nail powder.

3. "Mr. Hale says it is almost impossible to make a European comprehend the difference between Local and National government. Then he goes on to speak of the instance which he noticed when visiting the English Parliament, when the question was discussed, as to what should be done for a school-mistress who had been injured by a falling blackboard.

"Does Parliament usually attend to such petty matters, or had this case been referred from some lower tribunal?" The case in question had undoubtedly come up from some lower court. Dublin and Edinburgh are merely seats of administrative power, and carry out the laws framed by the home or London government. They have no more to do with the government of Ireland or Scotland, than New York City has with the affairs of the State. As Richard Smyth says, "In the constitution of the United Kingdom, despotic power lies in Parliament, and any grievance which defies the ordinary

remedies of law can be redressed by Parliament."

4 "I have seen a picture of the Parliament house in Ottawa. Would not any laws enacted there be considered local government? I do not presume to criticise, but would like to understand more about it." We are not to understand that there is no local government in English provinces, but their rights are entirely subordinate to the will of Parliament, and they have no right to decide exceptional cases or to devise modifications of law to meet such cases. Their business is to apply the laws already formed by Parliament to meet the wants of their particular counties and constituents.

BERTHA M. C. wants the post-office address of three or four popular authors whose names she gives. I am sorry, but I must decline to give any such addresses. Public people and writers are very busy persons, and no one has any right to intrude on their time with requests for autographs or letters of idle interest or curiosity, and if you have any real business with the ladies named, you can address them in care of their publishers. If you admire the work of authors so much that you can't rest without saying so, why don't you write your good opinion to their publishers? That would be doing a writer some real good, for such letters have weight. An editor of large experience was in the habit of saying that if six people thought enough of a writer for his journal to write how much they were pleased with his or her work, that author was marked as valuable to the paper and was likely to be permanently engaged. Instead of taking up the overfilled time of busy, working persons with an apology for writing at all, and telling how you have often thought you would like to know them, and how much you should prize a letter in return and all that stuff, which authors receive from a hundred silly nobodies a week, and on which they all are ready to cry out "bore," why don't you write to their publisher, saying in a modest way that you are very much pleased with such and such articles or books, and hope to have more to read from the same authors. That would be something they would thank you for, in their heart of hearts. If you like a book, send your compliments to the publisher always — not to the author.

GERTIE M. 1. Use cretonne of warm, dark colors, lined with red or olive silesia for winter window curtains to your bedroom. I cannot recommend the cotton flannel so much used, as it fades badly. The deep, all red German damask used for tablecloths is much liked for draperies, as it washes and lasts better than anything else.

2. The simplest decorations for cake are the prettiest; a beading of pearly sugar plums on the edge. Guipure lace patterns are pencilled on the plain frosting and followed with a tracery of lines of frosting pressed from a paper horn filled with the mixture, or put on with a confectioner's

syringe. White leaves and ornaments are sold by fancy bakers for decorating cake, and can be used more than once, as they are not to be eaten. A cluster of phantom leaves is very pretty on cake, or bunches of white currants crystallized. Crescents of lemon and orange peel dipped in frosting, or coral sprays in rough sugar seeds, which are easy to arrange.

LOU VERNON. The poem, which you desired, "Rock of Ages," is to be found in *Songs of Sunshine and Shadow*, by Maud Moore, published by D. Lothrop & Co., price \$1.25.

JESSIE J. can find a list of Mrs. Mulock-Craik's works at the public library in her town, or on the list of Franklin Square Novels.

SUBSCRIBER. Skeletonize leaves by soaking or boiling them to loosen the pulp from the fibres. Beat them gently and wash in several waters, then bleach with a weak solution of chloride of lime. The process is too delicate to be described briefly, but these hints will guide you.

DAISY. 1. A girl of sixteen ought to be able to earn \$75 to take her to school, but if she wishes neither to teach or to work out, and has no artistic skill, she will hardly be sure of finding any employment except sewing and dressmaking.

2. Chloe is pronounced *Klo-e*.

FLORA J. P. 1. The United States flag was chosen by Congress June 14, 1777.

2. A letter written by a Roman of Judea, in the time of Christ, describes him as being rather fair, "the color of wheat." The disciples, being Jewish, had doubtless the dark complexion which accompanies Hebraic features.

3. Fishes can hear, and it is a favorite trick of musicians to draw them in shoals to the side of a boat by playing a flute with one end in the water.

R. T. H. This page has not room for examples in common arithmetic. Ask your teacher for an explanation.

A. B. C. 1. Cherryburn is a pretty name for a place with a spring and a cherry orchard. Summerside and Summerest are names given to cherry orchard homes.

2. You can become a good conversationalist only by having plenty to talk about. Lay up all the interesting, droll and kindly things you read and hear, think before you meet people what you can say to them that will be kind or pleasant, and practice, by being just as entertaining as you know how to any and every person you talk to.

3. The sulphate of quinine ointment sold by druggists is recommended to make eyelashes grow.

L. M. W. Send to the publishers for the back numbers or odd numbers of any magazine. You will find the address and the price on the first page of the cover.

THE WISE BLACKBIRD.



TALES OF THE PATHFINDERS.

BY ARTHUR GILMAN.

CHAPTER IV.

THE LADY REBECCA, AND SOME OTHER WIVES.

WHEN I think of the efforts to establish colonies in our country, I hear ringing in my ears certain lines of verse. I think again of little Virginia Dare breathing out her gentle young life and leaving her tender body to be buried beneath the sands of a Southern shore. With her vanishes the only representative of childhood in that day that I have heard of. Then it is that the air sings to me :

A dreary place would be this earth
Were there no little people in it ;
The song of life would lose its mirth,
Were there no children to begin it.

The sterner souls would grow more stern,
Unfeeling natures more inhuman,
And man to stoic coldness turn,
And woman would be less than woman.

I remember that not only were there no children among the early Pathfinders, but, as I have told you, seldom did a woman trust herself in the little boats with which her husband or brother or lover embarked to find his fortune in the wondrous New World. It was accident that carried Anne Dorset away from her English home. Love impelled Isabella Bovadilla to follow De Soto, and we may presume to say that the mother of Virginia Dare crossed the ocean from the same powerful motive. These were exceptions to the rule, and after Virginia Dare died, there were no women among the colonists for a long time. It is this fact which lends interest to the story of the Lady Rebecca and some other wives, that I am now to tell you. Perhaps I ought to speak of the other wives before the Lady Rebecca, but I shall not.

The most of my story relates to the fifteen years that followed the death of Queen Elizabeth ; long

and dreary years to Raleigh, who was pining in the Tower of London, where he had been confined by his jealous sovereign, King James, of whose reign he would otherwise have been one of the most brilliant ornaments. At the end of this tedious imprisonment, in the year 1618, Raleigh's head was cut off by the executioner, and we may suppose that the king tried to make himself believe that he felt happier, when he reflected that he had put out of the way one whom he feared as much as he should have honored him. It was not necessary for King James to emigrate to a childless world, as the verses suggest, that he should turn to stoic coldness ; fear of a great subject and subserviency to a foreign king were powerful enough to embolden him to this heartless deed.

Treacherous and cruel as King James was to Raleigh, he was the one who gave the charters to the two companies that made permanent settlements in America. They were in Virginia and Massachusetts. It happened that the enterprising and intelligent men of England were obliged by circumstances to engage in establishing colonies in America. Among them was the Lord Chief Justice of England, Sir John Popham. We find many persons bearing titles among those who, at about this time, turned their attention westward. Any enterprise that is taken up by such people in England becomes popular, and we should not be surprised to be told that a great many men entered into the schemes for colonization with ardor, when Sir this and Lord that allowed it to be known that they were interested in them.

King James is the person to whom we owe the translation of the Bible that is still in general use, in spite of the fact that a new one has just been made which most scholars consider better. He is known in history as the Wise Fool, the Solomon of England, and by other titles of the same sort. The historian Macaulay says that he was two persons, a well-read scholar and a drivelling idiot ;

which is pretty strong language, but he did so many foolish acts that it does not seem too forcible. In the year 1606, he showed both sides of his character. A few months after the land had been stirred up by the famous Gunpowder Plot, the king issued the patent that led to the founding of British civilization in America, and it was so generous in its terms that we can hardly believe that it was not dictated to him by some one of his wiser courtiers. A few weeks later, he had a visit from a royal relative from Denmark, and obtaining a good grant from parliament, he set his people an example of riotous excess. So great was his influence, that ladies were seen to roll about London in a state of intoxication, and a letter-writer of the day says somewhat confidentially, "I will now, in good sooth, declare to you, who will not blab, that the gunpowder fright is got all out of our heads, and we are going on hereabouts as if the devil were contriving every man should blow himself up by wild riot, excess and devastation of time and temperance." The "wise fool" was not a whit behind his subjects, if he were not actually worse than they in the indulgence of dissipation at his royal residence called Theobalds. It was at this place that he gorged himself with table delicacies, at times lying in bed all the day for the purpose. It was there that he filled his body with wine, and then wrote his Counterblaste against Tobacco, for he had taken a great dislike to the Virginian weed. The counsels of such a king could not have much influence, for while he denounced one indulgence he encouraged a worse by his outrageous example, and naturally the use of tobacco kept on increasing. People liked to "drink" tobacco, as they said, and they seem to fancy it no less now than they did then. Thus it was that King James appeared to his people as the well-read scholar writing a judicious charter for a new colony that was to grow to be a great nation, and also as the drivelling idiot dissipating his time and squandering the substance of his people in riotous living that would have been disreputable in the meanest of his subjects.

The king's charter for Virginia was signed in the spring of 1606, and all summer preparations were pushed forward for the momentous expedition. Ships were fitted out, and provisioned for a voyage that was certainly to be long, but how long, no one was wise enough to tell. We can imagine the interest that was excited by these doings. On all sides, men and women were talking about the wonderful country. Doubtless some had seen a play acted the year before in which the land had been described as already full of Englishmen, as being rich in gold, precious stones and the less valuable metals, as a place where life was all that the most luxurious could desire, and to which a direct wind would safely waft the seamen. It was a land to satisfy the desires of the dissolute, the

lazy, the ambitious, and when the promoters of the colony that was to sail, gathered together the emigrants, a week before Christmas, they found on the decks of their three ships more than a hundred men, of whom one half were "gentlemen" of broken fortune and no character to speak of, and only about a dozen were laborers able to till the soil with intelligence. The company gave the party orders to explore the country, to sail up the rivers, to find an entrance to the rivers Volga and Dwina, and the great Eastern sea, and under no circumstances were they to offend "the naturals," as they called the native inhabitants of the country.

As the preparations had advanced, the interest had increased in London, until all the scholars, all the merchants and statesmen, and most of the laboring classes were talking of nothing else with so much earnestness. Even the poets and literary men stopped to say their word of sympathy, and all united in the prayers uttered for the welfare of the emigrants and in the sentiments expressed by the poet Drayton, when he wrote—

You brave, heroic minds,
Worthy your country's name,
That honor still pursue,
Whilst loitering hinds
Lurk here at home with shame,
Go, and subdue!

Britons, you stay too long,
Quickly aboard bestow you,
And with a merry gale
Swell your stretched sail
With vows as strong
As the winds that blow you.

It was the first of January before the cliffs of England disappeared from the view of the voyagers, and it was not until the end of the following April that the coast of Virginia was reached. The next month a settlement was begun on the site of Jamestown (named for the king), and it became the first successful attempt of its kind, though the colony passed through many trials. The savages gave them trouble at times, and there were dissensions among members of their own ill-assorted community. The number of workers was very small, and the gentlemen who had come out as a "speculation," as we might say nowadays, were disappointed that they found none of the gold and precious stones that they had supposed were to be gained so readily. At one time they had only one left of five or six hundred hogs, unfriendly Indians having killed many of them, there was not a hen or a chick in the fort, and all the horses had been slaughtered for food. Of the men, it was said that they were of such "distempered bodies and infected minds," that no example of goodness or of punishment could deter them from their habitual impieties, or terrify from a shameful death. It was no wonder that Captain John Smith, who was

the foremost man of the colony, wrote home, "When you send again, I entreat you rather send but thirty carpenters, husbandmen, gardeners, fishermen, blacksmiths and diggers-up of trees' roots, well provided, rather than a thousand of such as we have."

But even in their poor state, they had a "church." It was made by hanging a portion of an old sail to three or four trees as a shade from the sun. The walls were simply wooden rails, the seats were unhewed trees, and the pulpit was formed by nailing a piece of rough timber to two trees. In bad weather the congregation was removed to "an old rotten tent." After a while, they were able to build a barn-like structure, the top and sides of which were covered with sedge and earth, and they probably thought the change was a very pleasant one to it from the old tent or the overshadowing awning. The houses of the people were not much better than their church.

From the first, the colonists had been in contact with the Indian inhabitants, and they dignified their rulers with the high-sounding titles borne by European sovereigns at the time. If a woman were at the head of the affairs of a tribe, she was called an empress; if the head person were a man, he was known as an Emperor or king, and of course, their children were princes and princesses.

Their rude homes were honored with the name of Courts, and a glamor was thrown upon the condition of the natives that has not been entirely dissipated by the passage of two centuries and a half.

Among the Indian rulers was one known as Powhatan. Captain Smith fell into his hands once when he was on an exploring expedition, and was apparently very well treated. Powhatan had a family, of princes and princesses of course, one of whom has become historic. She appears first as a little girl of ten or twelve years of age, playing in the irregular streets of Jamestown with the little English boys, and indulging in many pastimes that we never suppose princesses permit themselves to enjoy, at least in the company of those who can boast no royal pedigree. When Captain Smith had gone to England and wished to magnify his experience among the savages, as he had been accustomed to magnify his doings in other parts of the world (for he had had wild adventures in Egypt, Hungary and other foreign countries), he wrote a book in which he gave a story to the effect that at one time he had been about to have his brains dashed out by Powhatan, and had been saved by little Pocahontas, who threw herself upon him just as the great Indian club was about to fall. He seems to have forgotten that in his first account of his adventures he had represented Powhatan as very kind to him, and not at all likely to wish him killed.

One writer tells us that the name Pocahontas

meant "Little wanton," and her acts seem to give us some reason to believe that his interpretation was correct. However, that makes no difference. Many a person in our day has grown up to be staid enough who was trifling as a child, and shall we expect more of the little Indian maid than we do of a Christian child? Captain Smith sent her presents and she was a frequent visitor at the new town of the white strangers. When she was about



THE YOUNG WOMEN FROM ENGLAND.

fourteen years old, it is said that she journeyed one dark night through the woods to let the pale faces know that her savage father meditated vengeance upon them, and that Powhatan was so incensed at her conduct that she was afraid to go home for a time at least.

When Pocahontas was seventeen years of age, she was taken by the whites and kept on one of their ships, and it proved a turning point in her history, for there, one of the men, John Rolfe, fell in love with her, taught her the rudiments of Christianity and the next year made her his wife. Rolfe is described as "an honest and discreet" young Christian who had heard voices in the Virginia woods—the beautiful Virginia woods—calling upon him to lead the blind Indians into the right

path, and he began his efforts with this "unregenerated maiden." At the proper time she was baptized and named Rebecca, which means "of enchanting beauty." A font was hewn out of the trunk of a tree, and probably in such a church as we have described, the dusky beauty openly renounced idolatry and was admitted into the membership of the Church of England. At her marriage, which was performed with the approval of her father, she was given away by one of her uncles, and made the proper responses in a style of broken English that must have been very charming, at least to John Rolfe. The friendship of Powhatan was ensured by this marriage, and the colony did not suffer from the Indians for a long time.

The Indians of that time appear to me to have been a nobler, handsomer type of humanity than those with which we become acquainted when we visit our Western wilds, and I look with the most romantic interest upon this wedding that those who saw it thought promised a general mingling of the races and a prophecy of peace and happiness. It was not to be so.

Pocahontas was a worthy wife, so far as we know, and Rolfe a pattern husband, but when they left the woods and meadows of the fresh New World and sailed for the crowded capital of Britain and entered the artificial atmosphere of court life, as they did in 1616, the child of Nature pined and died at the early age of twenty-two. A few weeks before her death the Lady Rebecca attended the theatre and saw one of the masques of Ben Jonson, which much pleased her. She was presented at court by Lady De la Ware, and it is significant of the feelings of the time that after it was known in England that Rolfe, a subject, had married a princess, it was gravely discussed in the Council whether he had not been guilty of high treason in so doing. The Lady Rebecca was about to sail from home when she died, but she left a son, Thomas, thought to have been named for Sir Thomas Dale, governor of Virginia, who survived and was afterwards looked upon with pride by some Virginians as their ancestor.

It was not strange that Rolfe should have fallen in love with the beautiful Indian maiden. Not all of the colonists were able to find wives, as he did, however, and as women did not seem to come from England readily, a scheme was formed to supply the other and better half of the social power.

Children were sent out from England—"starving boys and girls picked up in the streets of London," and one Owen Evans, a venturesome Eng-

lishman, began boldly to kidnap young women to ship to Virginia. So much terror did he spread among that class of people that many fled from their homes and hid themselves until they thought that danger was past. In due time, however, the company that had charge of the colony took the matter into its own hands and made arrangements for shipping boys and girls to be apprenticed to the inhabitants. One hundred were sent out in 1618, and more followed, and they were carefully provided for.

Finally the happy thought struck some one that young women might be sent out and selected on their arrival by those who wished to make them wives. The Company entered upon the work, sending at first twelve on one ship, and then on another, enough more to bring the total up to fifty.

They wrote that extraordinary care and diligence had been exercised in the choice, none being sent of whom there had not been had "good testimony of their honest life and carriage," and the hope was expressed that they should be "received with the same Christian piety and charity as they were sent."

One would think that the settlers might have looked askance at this method of furnishing them with "help-meets," as they are sometimes called by mistake, but they all thought (as wise men will think) that a good wife is one of the best gifts of God, and that they ought to accept her in whatever way she should come. The Company guaranteed both the young women and young men freedom in choosing their partners, and provision was made for those who did not find any husbands to whom they felt willing to trust their happiness.

If a bachelor saw fit to take one of the Company's maidens, he was obliged to pay one hundred and fifty pounds of tobacco for her, or rather to refund the expenses of bringing her over seas. If any of a particular lot happened to die on the passage, the cost to the marrying men was increased enough to make the aggregate equal to what it would have been had the full number arrived and been married.

Thus was this company of our Pathfinders successful in establishing itself on the Virginian coast. Thus was the colony furnished with the pleasant society of children, and thus did the Lady Rebecca and some other wives give joy and comfort to the young colonists who pined for the delights of home, for home was home, even two centuries and a half ago and in the wilderness of a strange land.

IN CASE OF ACCIDENT.

BY DR. D. A. SARGENT.

IV.

THE BLOOD AND ITS VESSELS.

THE blood is the principle source of vitality. It is composed of a thin watery fluid filled with little red and white cells called corpuscles.

These corpuscles range in size from one-twenty-five-hundredth to one-four-thousandth of an inch in diameter, and there are more than fifty billions of them in the human body.



FIG. 1.

The total amount of blood in the whole system is equal to about one eighth the weight of the body. The red corpuscles are composed largely of oxy-

gen, which is essential to the life of all parts of the body.

The blood is distributed throughout the body by a system of closed tubes. Beginning with one great branch at the heart, this is gradually divided and subdivided into smaller branches, until they terminate in a fine meshwork of tubes called capillaries. These capillaries are so numerous that it is impossible to prick any part of the body with the finest needle without wounding some of them. The blood which is sent from the heart through these tubes (arteries) is laden with oxygen and is termed *arterial* blood.

As soon as it gets into the capillaries their walls are so thin as to allow the constituents of the blood to pass through them and mingle with the surrounding tissues. In so doing certain chemical changes take place in which the oxygen of the blood is consumed, and carbonic acid produced.

Blood which has lost its oxygen is no longer fit for the nourishment of the body, and it must be sent back to the heart and lungs, where it gives up part of its carbonic acid, and gets a new supply of oxygen.

To carry the blood back to the heart, another system of tubes (veins) is necessary. These begin with the capillaries and gradually grow larger and larger until they terminate in two large trunks which empty into the heart. The blood thus returned is called *venous* blood, and differs from *arterial* blood in its dark red appearance.

The *arterial* blood is bright red, and inasmuch as it is sent directly from the heart, it gushes out in spurts if any of the arteries are wounded.

As the blood is so essential to life and health, any accident which occasions its loss to a great extent, must be regarded as more or less serious.

How to prevent excessive bleeding in case of injury is something which every one should know. For a person might bleed to death before medical aid could be procured.

BLEEDING FROM THE NOSE.

This is the most common and the least dangerous of accidents to blood vessels, but sometimes the bleeding is persistent, and needs to be checked. The best way of doing this is to apply cold water to the neck and face. Hold a sponge saturated with cold water to the nostrils, or if this does not succeed, dissolve a little alum in a basin of water and inject or sniff some of this up the nostrils. Hold the head back and do not attempt to blow the nose.

BLEEDING FROM INJURY TO THE LIMBS OR BODY.

In case of a wound where there is considerable bleeding use cold applications freely. Small pieces of ice wrapped in a handkerchief are excellent. Before and after such applications can be obtained rely upon pressure immediately over the parts wounded.

If in the hand or arm hold it above the head in a vertical position. If in the foot or leg lie upon the back and elevate it above the body. In both cases you will lessen the flow of blood through the wound.

If the bleeding still continues you must try and discover its immediate source and check it.

If the blood is bright red in color, and flows in jets, you may know that an artery has been injured. In this case you must endeavor to stop the flow by exerting pressure upon the artery between the wound and the heart. Nothing is better for this purpose than the pressure which can be applied by bandaging.



FIG. 2.

If you have an elastic cord, or pair of elastic suspenders, wind these tightly around the limb, one layer above the other, so that the bandage will press the artery firmly. If you have no elastic, use common cloth, but put one layer above the

other for several thicknesses, and when you have carefully secured them, pour cold water on the bandage to shrink it. If you can locate the artery, a stone tied in a handkerchief or a hard knot placed over it, and firmly tied, will sometimes relieve the hemorrhage. But unless you know exactly where the wounded artery is, pressure applied in this way will sometimes do more harm than good.



FIG. 3.

Now a few words as to the location of some of the important arteries likely to be tributary to a wound.

BLEEDING FROM THE HAND OR ARM.

If the finger or thumb is injured, pressure on the sides of each will usually cover the arteries of those parts (*fig. 1*).

Profuse bleeding from a wound in the hand may sometimes be checked by pressure over the artery on the thumb side of the wrist, where the pulse is usually felt (*fig. 2*).

If not, then pressure exerted on the inner side of the upper arm by gripping the muscle so that the fingers will cover the artery, pressure by a tight bandage, or by a block of wood or a stick placed under the arm (*fig. 3*) will tend to stop the flow of blood to all parts below the elbow.



FIG. 4.

BLEEDING FROM THE FOOT OR LEG.

Dangerous hemorrhage from injuries to the foot or leg may be checked by pressure over the large artery on the inner side of the thigh (*fig. 4*).

This may be applied by the fingers or thumbs, but as their strength would soon be exhausted, it is

better to rely upon the bandage. To get this tight enough put a stick or cane under the bandage, and twist it around until the bleeding stops.

BLEEDING FROM THE HEAD OR FACE.

Bleeding from a wound in the head or face may be arrested by pressure applied over the artery at the front side and base of the neck just above the collar bone (*fig 5*).

If the injured person faint either from the loss of blood, or from sight of it, or from emotional disturbance caused by witnessing the excitement of others, put him in a reclining position, with the head low and the extremities slightly elevated. As a general rule, do not administer spirits of ammonia, brandy or other stimulants, as they excite the action of the heart and may increase the hemorrhage.

Do not attempt to dress the wound with old rags, flour, whiting, clay, etc., as these substances interfere with the natural, healing process.

Continued pressure is the best means of stopping the bleeding; the dressing had better be left for the doctor to attend to. A clean pocket handkerchief, or a piece of linen or cotton moistened with cold water may be placed over the injury to protect it from the air, and a pad of the same material may be used with advantage under the bandage to keep the edges of the wound together and help arrest the flow of blood.

It must be remembered that a very little blood mingled with water will cause considerable coloration, and lead one to think that more blood is being lost than really is. You must not allow yourself to be deceived by false appearances, and thus lose your self possession. You must show no sign of excitement, but work quickly and with a clear knowledge of what you want to do.



FIG. 5.

LITTLE BIOGRAPHIES.—HOW SUCCESS IS WON.

BY SARAH K. BOLTON.

IV.

JOHN WANAMAKER.

IT was about twenty years ago that a poor young man, in Philadelphia, started, in the southwest part of the city, a Sunday-school, in a shoemaker's

shop. Saloons were on every corner round about. Rough men fought and stoned each other in the streets, and murders were not uncommon.

"You will probably lose your life!" said his friends, trying to dissuade him.

But that young man had become a Christian. The highest love always renders us heroic, and

forgetful of self. Young Wanamaker's sunny face, his warm grasp of the hand, made him immediately seem a friend to the roughest man he accosted.

His school grew in numbers, and was moved into a tent. While the young men of his time enjoyed their leisure, the encouraged superintendent, laboring all day to earn his bread, went on gladly giving his evenings and his Sabbaths to lifting the lowly; year by year his hope, and his faith, and the school grew. One after another the saloons disappeared. Pleasant homes were built in their places. The years still went on. By and by a beautiful stone structure arose, with these words graven on its front: *A Little Child Shall Lead Them*. On Sundays three thousand scholars gathered in the spacious assembly room. This room was of itself attractive, with its frescoes of blue and gold, and its cool silvery fountain in the centre. Presently, too, the adjoining church was built for the twelve hundred members which had grown up from the Sabbath-school, the poor young man, now a millionaire, giving sixty thousand dollars as his thank-offering for God's blessing on his work.

The last time I stood in Bethany Sunday-school and heard the exquisite music, and listened to the dying message of one of the boys, "Thank the superintendent for the help he has been to me," I bowed my head in gratitude that here and there, like a beacon light, there shines out an ideal life like that superintendent's to inspire noble aspirations in others—noble aspirations and courage to undertake Christian work.

John Wanamaker was born in 1838. His parents were Christian people, but they were poor, and all his early life was a struggle with poverty. Of a summer morning, before school-time, little John turned five hundred bricks for his father, that they might dry in the sun, thus earning two cents each day. When a mere boy, he worked in a bookstore at a dollar and a quarter a week, walking four miles each morning and evening to do it, often buying a two-cent dinner—a cup of milk and a biscuit, that he might save the more money for his mother. A good boy he, be sure, who would undertake four-mile walks and two-cent dinners to earn money for his mother!

"Her smile was like a bit of heaven," he once said to me, "and it never faded out of her face to her dying day." If a kiss from Benjamin West's mother made him a painter, the smile of John Wanamaker's mother gave the inspiration and cheer which have made him the warm-souled "Merchant Prince."

By and by the cheerful lad obtained a place in a clothing store at a dollar and a half a week. There he soon won the approval of his employer, because he determined to be "the best in whatever he had in hand." This sort of ambition has been the keystone of many a bridge over which boys have passed from penury to plenty.

Balzac, the French author, when urged by his father to enter law, because in literature one must be either king or hodman, replied, "Very well; I will be king."

The boy's first intellectual stimulus was from hearing a sermon which he did not understand. Writing down all the difficult words, he looked up the meaning of each in the dictionary, as soon as opportunity offered. Not content simply to sell goods, at eighteen, with another lad, he published a paper called *Everybody's Journal*, he soliciting the advertisements and serving the subscribers. The partnership could not be other than harmonious, as he did all the labor. Until he was nearly twenty-three years of age, he worked on in the store, every week carrying his money to his parents. Does this seem business folly and weakness to any of you? Well, I have never known son or daughter who obeyed the fifth commandment to go unrewarded.

And now the work of the Bethany Sunday-school was begun. There was but one life to live, and how could he make the most of it? Full of the reaching, leaping strength and the unlimited enthusiasms of youth, he was yet deeply meditative and reflective. Should he study for the ministry? He pondered the subject. Then, instead, he considered men like George H. Stuart and William E. Dodge, prominent business men who had done honor to Christianity in their daily deeds, preaching a noble and very convincing gospel in all their dealings, great and small. Surely there was as sore need for consecrated business men, on 'Change and in the counting-room, in these days of marvellous commerce with the ends of the earth, as in the pulpit.

On his twenty-third birthday he had decided. It was then, I think, that he wrote over his name the resolutions which have governed his life. He said, "I will embark in the clothing business, because I understand it, and I will let nobody dissuade me from my purpose." Two of his mottoes were these:

"He is a rewarder of them that diligently seek him."

"No man is ever lost on a straight road."

And now his life was well ballasted with a purpose. That grand old Scotchman, Carlyle, once said, "The man without a purpose is like a ship without a rudder—a waif, a nothing, a no-man. Have a purpose in life, if it is only to kill and divide and sell oxen well, but have a purpose; and having it, throw such strength of mind and muscle into your work as God has given you."

Young Wanamaker now began to show his business sagacity. He invested the first one hundred dollars which he was able to save, in an undivided interest in an estate, bought two more shares on credit, settled the matter to the satisfaction of all parties, and cleared for himself a trifle less than

two thousand dollars. With this money he began active business. Presently, too, he married a Christian girl, who had faith in his future, and confidence in him. She might well argue in her heart that a dutiful son would make a devoted husband.

The Civil War had just begun. Many discouraged his enterprise and prophesied failure, but the self-reliant, straightforward young man had no expectation of defeat. He possessed will-power to the degree which Victor Hugo calls genius. He had also *the habit of hard work*. He swept his store, and kept his account books. When a bill of goods was to be delivered, and no one was at hand to do it, he was not too proud to trundle the wheelbarrow along the street. Did he

dry goods store in America, with three thousand employees!

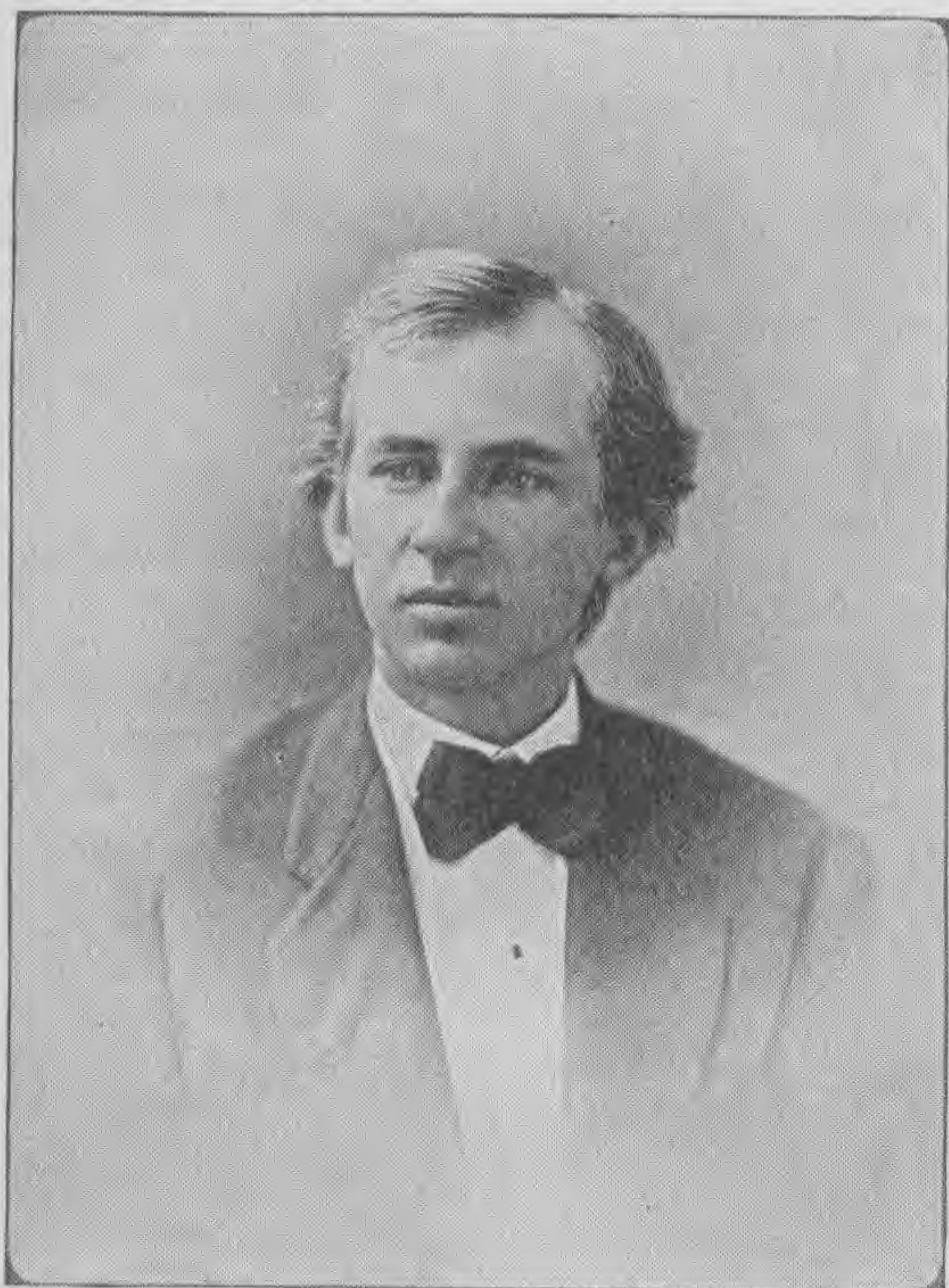
Was this chance? Was this luck? It was consummate ability. It was the work of a mind that thought out large plans and original methods. It was the logical fortune of a man that with quickness of perception knew how to seize opportunities, that could inspire prompt, strong men with his own enthusiasm, that could systematize, and with swift conclusions, few words and bold action, could crowd much into little time; that with genial and polished manners knew how to win friends in the business world, in circles high or low, and also how to hold them — ah! it is his sincerity that has held them.

He might count his honors, his public recognitions, if he would. When the Centennial Exposition was talked of, and Philadelphia looked about for men to aid in the vast enterprise, John Wanamaker was one of the first called to the national work. He was made chairman of the Bureau of Revenue, and with the aid of the Board of Finance, he raised the first million dollars; he was chairman of the Press Committee that brought the subject before the whole country; and with much labor and judicious management, he stood by and helped carry the enterprise through to its success.

Meantime he had been a leader in every good work. He was one of the founders of the Christian Commission. In the Moody meetings, his eloquence and leadership were invaluable; his sympathy and tenderness touched thousands of hearts. Daily and systematic reading had enriched his thought, trained his mind, enlarged his sympathies, broadened his outlook, widened the horizon of all his heights. Said a prominent man to us recently, "I have not read a book for five years, business is so absorbing." But the man who does not daily broaden his mind and heart, goes poor into eternity.

In the later years, Mr. Wanamaker has given one hundred thousand dollars to the Young Men's Christian Association, of which he has been president for thirteen years, has built a church near his country home, has aided hospitals and orphanages, and, says a friend, "He gives a fortune every year in private charities." Three years ago he established an Industrial College at Bethany, where five hundred boys and girls, under the presidency of Rev. Dr. Arthur T. Pierson, study bookkeeping, telegraphy, cooking, embroidery, printing, painting, etc. A mission akin to that of Cooper Institute. Thousands of our future citizens will probably bless him all their lives for having been thus enabled by him to earn their living, and to establish themselves profitably and pleasantly in business.

How does he find time to accomplish these charities, and yet manage his great business interests? He saves the moments, often studying the next Sunday-school lesson as he goes from his business to his home. On his desk I read the



JOHN WANAMAKER.

dream, then, that some day Philadelphia would ask him to represent her in Congress? Emerson truly said, "The man that stands by himself, the universe stands by him also." Canon Farrar well calls labor the girdle of manliness.

Fifteen years passed on. The young merchant had attended closely to business, advertised largely and judiciously, held strictly to one price, given customers the best for their money, chosen men enterprising and sagacious for the heads of his departments, and now, at the end of these years, found himself the owner of three stores, covering nearly seven acres, one of them, the largest retail

words, framed : "*Nulla dies sine linea.*" "*No day without a line,*" the motto of the painter, Apelles.

Mr. Wanamaker is still in his early prime. He has light hair, blue eyes, with the light of youth in them, and a frank, manly face, whose sunny smile, like his mother's, one never forgets. Said one of his employees to me : "I can work better for a week after a pleasant 'good-morning' from him." With a persuasive voice, a magnetic manner, a noble presence, he wins every person with whom he comes in contact, as I have said before.

Unostentatious, he is yet a born leader of men. With the skill of a general, he deploys the seven thousand persons who work for him. Years ago he said to his associates, "I will not lie to sell goods," and he requires no deception, no subterfuge, from his clerks in their dealings with buyers. He says, "When a country boy, I was shy about going into fine stores; and I resolved if I ever owned one, that everybody should feel at home in it, and not be urged to buy goods." It is a pleasure to walk through his immense houses, look at beautiful things, or linger in the reading-rooms for rest. Always progressive, he was the first in this country to use pneumatic tubes for carrying money in place of cash boys, and to utilize the electric light.

But this busy, alert, occupied man takes time to carry flowers to the sick-bed of a Sunday-school scholar, and to talk with any person who needs his help. A man came to the office one morning and asked for Mr. Wanamaker. A score were waiting

to transact business with him, involving thousands of dollars. What was his errand? To talk about being a Christian! The great merchant eagerly responded. That hour together they knelt and prayed over this, the most important decision of life.

In his home, with his four children, he is a boy again. He enters heartily into their amusements. He plays croquet as though croquet were the one important thing in a man's life. He starts off arm in arm with a friend to see who can come out ahead in a brisk mile walk. It is this warm winsomeness of temperament that will keep him always young. He is interested in boys and young men. He says often after the day's whirl of business, "The best thing I have had to-day was a talk with a poor boy."

Does it seem strange now with his upright life, his energy and his attention to his business and good judgment, that he should have won success? Does it seem strange, with his sympathy, his consideration for others, and his cheeriness, that people love and trust him? You must see, I think, that it has not been chance or luck. And is it not inspiring to see a man, still young, so grandly successful in business, so eminent in Christian work, and so joyous and brotherly as to make life for himself, and for those having to do with him, like one of those bright days in spring, when hope, courage, a sense of youth and strength and some gladness to come is in the very air?

ANNA MARIA'S HOUSEKEEPING.

BY THE NEXT NEIGHBOR.

XVI.

WHEN COMPANY COMES.

WELL," says Judith Purvear, opening her handsome fur-lined circular, and throwing back her thick satin bonnet-strings, as she settled herself for a neighborly call, "I've just been to Mrs. Hillyer's over on Spring street, and such a state as that woman was in! I don't doubt she's out of her mind by this time! Expecting company, you know—her brother's wife she never has seen and her mother coming on to stay a fortnight on their way to the other brother's, in Maine. You know Penelope Hillyer is a great hand to put on all the style she can carry, and her mother learned it to her. And that little Jennie Hillyer is so anx-

ious and so afraid everything won't be just right, it's funny. She's had all the carpets up, and the paint scrubbed, and cut up her organdy dress to flounce the toilet table, and sent to town for English preserves and pickles for fear Penelope won't think hers good enough; and she wanted to know if I thought it would do to put the big easy-chair in the parlor for old Mrs. Spinner, because the sun has faded the reps; and would I hang the lace curtains all round the bay window, or just across the arch; and when I dined at the Wards' were the spoons crossed at the corners of the table, or laid beside the dishes, and was the bread on table or on the sideboard; and did I think it would do to have colored napkins for breakfast, as they did on account of the children—she had a set of such pretty colored ones—and would I set the cups and

saucers ready for pouring coffee, or pile them together — she heard both ways were used; and would I have boiled ham for breakfast, or wouldn't folks expect it? Boiled ham for breakfast! Where did you ever hear of that! *Where* do you suppose she was raised?"

It wasn't worth taking up seriously. Such a woman never knows when she has the worst of it; but my sympathies went with little Mrs. Hillyer, anxious to please her grand sister-in-law, and worrying about small proprieties, yet ready to make the queerest blunders. She went from school-life to housekeeping with very little practice of the latter — it would come of itself when it was needed, her mother said. But poor health came first, and with slender strength, the care of children, and a small income, she had fallen out of all ways of living save the easiest, and she never knew the art to make the easy-going life graceful. The family lived on picked-up dinners and scrappy breakfasts. Tidying was going on at all hours of the day, and was never done, after all; and the poor little woman never was through with her work, or knew any satisfaction in doing it. She couldn't put more strength into her overwrought brain and muscles, so as to grasp her difficulties, and sweep them out of the way any more than you could roll the ton of rock that lies by the road. But, worse than her inefficiency, was the coarseness of the comfortable, well-to-do woman who could only see something to laugh and scream over in the troubles and mistakes of her weaker neighbor. I wish I could make you see the horror and vulgarity of this spirit which seems spreading among the women and girls of to-day. "I could forgive a woman any fault," said one who knew the world, "sooner than contempt of a less fortunate neighbor."

If you don't want company to be a burden and a bore, and meet it with more blunders than poor Mrs. Hillyer, learn how to keep house for yourself first. And more than this, set yourself to learn the standards of good taste in matters great and small, even of such things as napkins and teacups, as well as more serious matters. In every two ways of doing things one of them is sure to be better than the other; and you may as well find out which it is, for these little things give the grace to housekeeping which no money can procure. Housekeeping! I write the word with a sort of love, for to me it means home-having! Just take down Mrs. Stowe's *House and Home Papers* to-night, and read the chapter which has these pictures of the noble housekeepers of New England.

In earlier ages the highest born, wealthiest and proudest ladies were skilled in the simple labors of the household.

By a lady we mean a woman of education, of liberal tastes and ideas, who without any very material additions or changes would be recognized as a lady in any circle of the

Old World or the New. The existence of a class of ladies who do their own work is a fact peculiar to American society. In early times were to be seen families of daughters, handsome strong women, rising each day to their indoor work with cheerful alertness, one to sweep the room, another to make the fire, while a third prepared the breakfast for the father and brothers, and they chatted meanwhile of books, studies and embroidery, discussed the last new poem, or some historical topic started by grave reading; or perhaps a rural ball. They spun with the book tied to the distaff; they wove; they did all manner of fine needlework; they made lace, painted flowers — in short, in the boundless consciousness of activity, invention, and perfect health, set themselves to any work of which they had ever read or thought. The amount of fancy work done in our day by girls who have nothing else to do will not equal what was done by those who performed, in addition, the whole work of the family. Those remarkable women of old were in a measure made by circumstances. There were no servants to be had, and so children were trained to habits of industry and mechanical adroitness from the cradle. Every movement was calculated, and she who took two steps when one would do lost her reputation for faculty. Now if every young woman learned to do housework and cultivated her practical faculties in early life she would in the first place be more likely to keep her servants, or would avoid that wear and tear of ill success in those matters on which family health and temper mainly depend.

The spirit of the chapter is condensed into the paragraph. Such young housekeepers as Mrs. Stowe describes are yet to be found in our American society, where they are its flower, of a kind which will come into cultivation again with the true damask rose and clove gilly-flower for which florists are beginning to look in old-fashioned gardens. It is a becoming ambition for any girl to aim at being one of them. And the final pride of housekeeping is to receive company well, so that you will not find it a burden, nor those who come to your house find themselves less comfortable than in their own.

Of course to do this, you will have to learn to treat yourself well; not like the genteel ladies we read of, who have hash and gingerbread lunch served with the same ceremony as a state dinner, to keep the children and servant-maid in training, but in that easy, well-mannered way which is neither slovenly when alone or stiff in company.

Two safe rules for entertaining are: Seldom apologize; never pretend. If you don't have dinner in three courses beside dessert every day, and you *know* Henrietta or Penelope doesn't either, why trouble yourself and the maid with changes of plates, and bringing in coffee in the small cups, and having out the finger-bowls that you use precisely a dozen times a year? The girl is nervous for fear she will not hand the cups, or use the berry service right, and you are secretly nervous for fear she may drop the precious ware, and forget to talk amusingly, and Penelope sees through it all. That's all you get by this bit of pretence. But you can every day train the girl or train yourself to wait on the table dexterously and quickly, which is the greatest comfort at any dinner, whether of

herbs or roast fillet, with game removes, and the cloth and napkins may be always fresh and well-ironed, not starched so that they slip from handling, or ironed askew with machine hems drawn and shrunk in washing.

The dishes may be ranged orderly on the table, and unsightly things removed at once, like the shells of baked potatoes and the oatmeal saucers, when used. To do this without disturbance, you want the little side-table, with two or three shelves to stand at your elbow while presiding at meals, with relays of dessert plates or dessert itself, extra spoons, knives and napkins, a bowl of hot water, and nice towel if spoons and things need washing to go around for different courses, while the lower shelf may receive the soiled plates, and keep them out of sight. One housekeeper I know has her bright little single oil stove with its bright brass and nickel-trimmings on such a table, and bakes her delicate griddle-cakes, boils eggs, or broils cutlets on a covered broiler while at the table. Why not? She does not wish to lose the cheery breakfast chat with family and guest, so she makes her work becoming enough to bring into the room with them. The batter is in a smooth, clay jar, modeled for decoration, but remarkably good she finds for kitchen use, or in one of those embossed stone-ware mugs of *Flandus jars* which you find at the German importers. The chops, or steak, neatly trimmed, are on a covered plate, to be cooked in a sheet iron broiler and served smoking hot to each person, just as the famous Beefsteak Club of London serves them in the grill-room to its titled members from its silver gridirons. It is all done like a lady, noiselessly and quickly, so that it is a treat to take a breakfast from her hands.

Breakfast over, such a woman will see that her guest is comfortably bestowed somewhere, before going to her own work. A visitor cannot expect you to devote your whole time to her, and you would both grow tired of each other probably, if she did. Of course if your cousin, or old school-mate from Minnesota or Idaho or Tahiti has come to her old home for a visit which she only expects to repeat once or twice in her lifetime, or the old neighbor who rarely leaves her own doorsill comes to stay a day and night with you, you will wish to spend every moment possible with her; and this must be arranged for beforehand.

If it is an intimate friend, and you think she would like it, take her out in your kitchen with you for a cosey chat while you wash the dishes and beat up the pudding for dinner. Try to have things about your kitchen cabinet so that polite persons will not be frightened to peep into it. One of the most charming visits I ever had in my life was with a New England literary woman who did her own work, and the evenings in her pretty, up-stairs drawing-room, when she set the music-box playing softly, and showed her choice photographs

and relics, and told of her Washington winter, or the long afternoon drives when we went through delicious coast scenery one day to see a quaint and celebrated collection of historical curiosities, and the next to call on Mrs. Harriet Prescott Spofford and the poet Whittier, were hardly more delightful than the mornings she went through her dishes and dusting, and let me go with her, while we cracked jokes in abandoned ease and long aprons. By all means, give a visitor her choice, naming several occupations available.

"Now, Emma, there's the last *Round Robin* novel, and the *Century*, if you want to curl down in the rocking-chair and read, and the bookcase never is locked, or the garden is pleasant for a stroll, and there's a nice view from the end of the street if you care to go farther; or if you want, bring your fancy work where I am, and we'll talk enough to forget we're in working quarters."

But have things prepared so that housekeeping will claim you as briefly as possible; and it is surprising how much can be done before a visit, even to having vegetables washed for three or four days, soup ready for heating up, jellies, creams, tarts, fruit picked, all dusting and cleaning done to your satisfaction, relays of clean towels and napkins all ready, plans made for entertaining your guest, the piano tuned, the carriage in order, even if it is only an old chaise to be brushed, washed, and the tires tightened. See that these things are done in time and not left to the last minute.

It's a piece of common care for your guest's comfort to see that she has as good a bed to sleep in as you can give her. Not only that the counterpane and toilet covers and mats are the freshest, but that the room, bed and pillows have been aired and sunned thoroughly the day before they are to be used. I have been put to sleep in a bed where the blankets were absolutely wet to the touch with sea air, and the mistress of the house next day was surprised, "for the things had been out in the sun all day less than a month before." The fever caught in that damp room lasted all summer. People grow so insensible to the odors and atmosphere about them that they never can be sure how these things may affect others coming freshly into them. You in health and elasticity may sleep soundly on a husk mattress on which a person with weak spine will toss all night in torture. And you may very properly think nothing better for most of the world than your nice hair mattress, when your old lady visitor may lose her rest the week she is with you for want of the feather-bed which she has used since childhood. Or a susceptible person will find a lasting headache brought on by sleeping on soft low pillows, when a tendency of blood to the head required that it should be kept up by three well-filled ones. Nothing shows a narrow, meagre mind worse than inability to comprehend or allow for other people's

habits which vary from your own. You may be as sure as you exist that hard beds and no pillows are best for health, and yet it may be just as true that some difference in the circulation or the nerves renders feather-bed and high pillows indispensable to the well-being of others. Inquire into these likings of an elderly visitor, or one who is out of health, if you don't wish their stay with you to be a penance. Consult their habits as far as you can as to the hours of rising and retiring and meals. In chilly mornings send up a pitcher of hot water, and light a fire for them to dress by, without needing to be asked for such comforts. Have the extra pillow and blankets in the room, and call attention to them when showing the guest up at night. Always take a visitor to the chamber assigned on arrival, as she may wish to put her toilet in order. Open closet and bureaus she is to have, for a guest has been known too bashful or delicate to appropriate them to her own use without permission. See that there is drinking water in reach, for one does not feel like wandering through a strange house in search of the ice pitcher, or like sending some one after it every time she is thirsty. Ink for writing, which is not conveniently carried in a trunk, matches, and a *clean*, well-trimmed lamp or candle, should be ready in the room, and some kind of foot warmer, if the weather is at all chilly and the fire cannot be lit. At night, just before retiring, have any slops in the rooms emptied, the pitcher refilled, the lamp wiped dry of oil and lighted ready, the heat turned on if there is a register, a nice book left out for a "nightcap," some trifle to eat in a plate — a little confectionery, crackers, apples, oranges — for one may lie awake hours with nervousness when a few nibbles of food would give the craving stomach something to do, draw the blood from the brain and send one to sleep comfortably. If you grudge these attentions, either you can't care much for your guest, or you need lessons in hospitality; and either way, had better dispense with invitations till you are ready to carry them out.

So in food your habits may be so different from your visitors, as to interfere with her health, and a little inquiry is the safest thing. Don't say you are not going to put yourself out for people; that what is good enough for you must do for them. In your house every one is dependent on you for comfort, and to make your tastes the limit for others is too boorish and selfish to contemplate. A rather conspicuous instance is in mind, when a well-known, cultivated Eastern lady left a comfortable home by advice of her physician, to travel in the Pacific States. Those who have taken the journey will know how she missed the carefully prepared table, the ever ready bath and the warm rooms people are used to in good homes. After her return one of the families she visited made their guest the subject of a magazine caricature,

the head and front of her offence being that the poor, worried invalid wanted fruit for breakfast, asked for a hot bath at night, finding herself in a house with a bath room, and complained of the poor quality of the grapes and the rawness of the climate as she had found it. Mighty crimes in a guest, who came with a letter from a mutual friend, requesting that all attention should be paid her. The family who could neither take pains to procure nice fresh fruit for a visitor when it was plenty, nor furnish a bath which would have been unspeakable relief to a nervous sufferer, and must then ridicule her publicly in an article, when her real name was given with the change only of a single letter, is a specimen of a sort of breeding not so uncommon as it should be, and will do for a pattern to avoid. I'm not talking now of the duties of guests to their entertainers; you have only to answer for your own part as hostess, which you are not to slight for any short comings of your guest. But I have seen such wretched illiberality of spirit between people of a different style of living and a thoughtless young visitor who perhaps picked the flowers and fruit more lavishly than her hosts were used to, or sat up later and burned more gas or oil than they thought proper, or kept the horse out too long for the convenience of the family, though not to any real injury, that I want to remind you that you don't receive guests to make them happy in your way, but their own, and you should either be willing to sacrifice some of your ways to them, or avoid trouble by never inviting them at all. It is a tribute to both sides when people of different families can stay a fortnight in each other's houses and part with as high regard as when they met. But whether your beds and cooking are to your friend's liking or not, whether her manners suit your notions or not, one rule is binding on both if you would consider yourselves well-bred — that the confidence between host and guest is sacred. Your guest is not to be "talked over" after she leaves; neither the holes in her stockings nor her soiled petticoats, nor the way she lay abed mornings, nor the way she liked to attract attention, nor her appetite for Baldwin apples, any more than she is to report what a shabby table you kept, or how dull the evenings were, or what a curious old lady your deaf aunt was. Silence at once and forever on all that concerns those who have slept under your roof. Do not allow yourself to be drawn into discussing their peculiarities, or betray a covert smile when they are named, or those who try to pump you will be the first to sneer at your loose tongue and bad manners when your back is turned. If your guest betrays you and circulates anything to your disadvantage, content yourself with explaining the matter when it comes up, but say nothing against her. In your silence, her ill-breeding betrays itself, and she is her own worst accuser.

WAYS TO DO THINGS.

BY EMMA E. SHERMAN.

XVIII.

HOW TO BIND MAGAZINES.

IT is often the case that in households where even several magazines are taken, that little money can be afforded for the purpose of binding them; and it follows that they are soon destroyed, or else stored away and never looked at. The pretty covers provided for most magazines by the publishers are of course preferable; but they also, of course, cost something. Therefore I have concluded to tell you of a durable, cheaper, and on the whole, pretty way of binding your yearly, or half-yearly volumes.

For several years we have made it a business to bind up our magazines every spring before cleaning-house time; and we proudly exhibit to our friends our collections of neat, strong books which

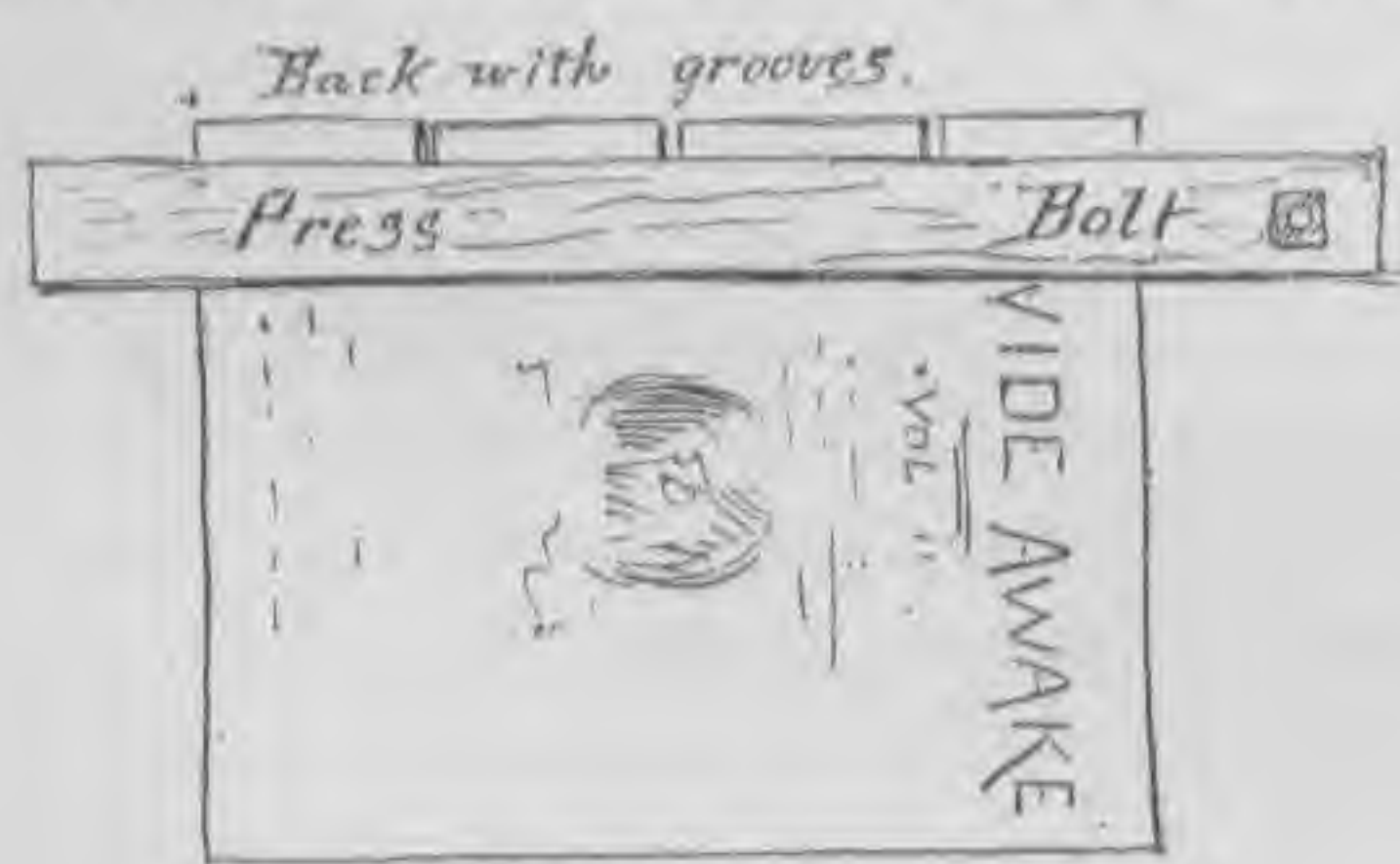


FIG. 1.

would look well in any library. We usually turn a corner of the living-room into a bindery, as we have no workshop. We bring in the work-bench with vise attached, pile our magazines on it, sort them into volumes, remove the covers and advertising leaves, put the engravings in their proper places if they are not there, place each volume according to date or page, lay the title page and table of contents at the top of each pile, and there are our magazines ready to bind. We have meantime a little pot of good glue in readiness on the stove, which, after it is dissolved thoroughly, is better to be kept only warm. A little good twine, a few strips of strong cloth about an inch wide, a hand-saw, a pair of shears, and some of the old covers and leaves are also at hand on the bench. Also we have two bars of wood an inch thick, two or three inches wide, and about two feet long, fastened together at one or both ends (one end only is necessary if a vise is used) by a bolt five or six inches long — this is the press.

Now we take a volume of the magazines, lay an old cover on each side. Making sure that the numbers are perfectly even at the back and upper ends, we place them in the press with the backs projecting a quarter of an inch at least, placing them in

the vise with the backs in a horizontal position (see fig. 1) and screw up pretty tightly. Then we saw into the backs as far as they project in three places (fig. 1). Next we

dip a piece of cord into the glue, and wind it back and forth once or twice in the grooves made by the saw. This, as you will see, binds the volume firmly together.

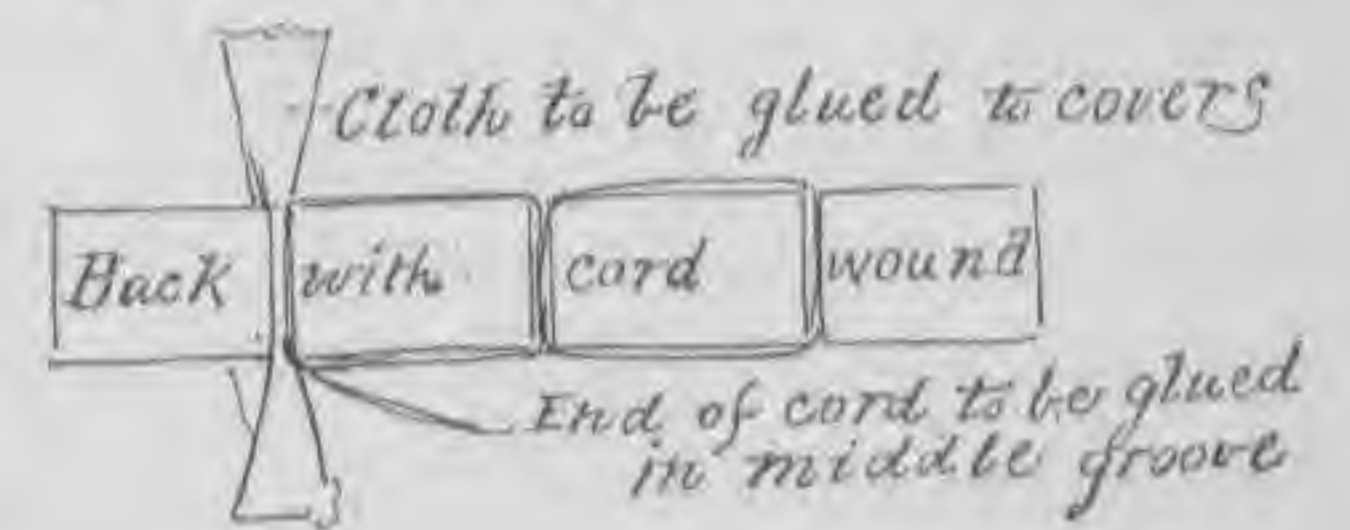


FIG. 2.

Now we take as many strips of cloth as there are grooves, each about six inches long, and gluing them in the middle, place one in each groove (see fig. 2). Then we cut a strip of strong paper, and glue it on the back of the volume.

The book may be taken immediately from the press, though it is better to not handle it for a little while, and another set of numbers be put in. Several volumes may be bound in a short time, and if these directions are followed the binding is altogether as durable as that done at a bindery.

The next thing in order is to smooth the edges; this we do by placing each book in the vise again — the tighter the better now — front edges up at first, and projecting far enough to allow them to be made even. Now we rasp them off even with the press, with a coarse furniture rasp, or the side of a saw. Sometimes we leave it thus, and sometimes we spatter-work it by dipping an old toothbrush in ink and drawing it across a sharp edge of wood, allowing the spatters to fall on the book before it is taken from the vise. The ends we treated in the same manner.

Now we have a pile of books, without covers, to be sure, but even at this stage they are more available than if they are not bound at all. However, we provide covers without expense. We use old paste-board boxes for this purpose, cutting them a little larger than the volume they are intended for. We lay these covers in place, cover and fasten them by gluing the edges of the strips of cloth upon the outside smoothly; the cover goes as far back as the cloth will permit. Then we make a cover of cloth for

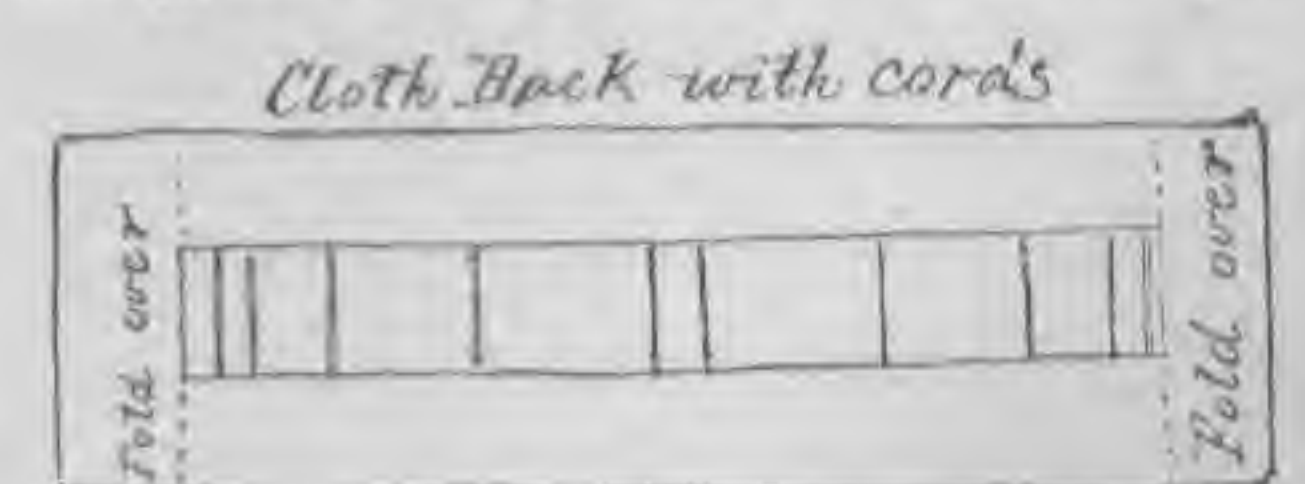


FIG. 3.

the back, usually using black or brown cambric, or selesia. The back cloth is always at least an inch longer than the covers, and about

three inches wider than the back; we cut coarse twine into bits a trifle longer than the book is thick, using as many as we may choose.

We dip these twines in paste, one at a time, and lay them crosswise of the cloth, one at each end, at least, and just as far apart as the covers are long (*fig. 3.*), laying the others between. Then we cut a strip of strong paper as wide as the cords are long, and just as long as the covers, and paste it over the cords, and then we paste the cloth down on the paper at the ends, and pin the completed back tightly around a stick—a broom handle is good—and let it remain there to dry. When we take it off we slip it over the back corners of the covers and fasten it strongly down with glue.

After this the covers may be finished as elaborately as you may choose; we bind the edges of most of ours with cloth, and then trim off the

edges of some of the front covers of the magazines and paste them on. We make a pretty inside finish by laying in a double leaf of manilla paper, one half pasted to the inside of the cover the other being left as fly-leaf.

The freshly bound books should be piled with plenty of paper between them to absorb the moisture, with weights atop, until they are wholly dry. Shabby books may be made almost as good as new by smoothing the leaves, rebinding and recovering; and it is surprising to see how pretty bits of wrapping paper, and bits of brown, black, or gray cloth can be made to serve in this work; bits of leather may be used on the corners of covers. Sabbath School papers, Lesson Quarterlies, etc., may thus be made into pretty volumes very easily. Five cents' worth of glue will bind a great many volumes, and the gluing is a much easier and better way than sewing.

DAYS AND NIGHTS IN THE TROPICS.

BY FELIX L. OSWALD.

CHAPTER VIII. (*Continued.*)

INHABITANTS OF THE TREE-TOPS.

"HEAVEN knows," laughed the captain, "perhaps they want to scare the panthers; but possibly they think it's first-rate music they are making. On a trip from Para to Rio Janeiro, we had three of them on board, and I remember that they struck up their national hymn whenever the evening was particularly fine, just like bullfrogs in summer; and if you tried to shut them up they would look quite puzzled; as if they wondered you were such a poor judge of concerts."

Our traps remained untouched that night, and we did not meet any game in the morning; it really seemed as if the musicians had cleared the woods for miles around. But after all, we did not come home empty-handed. In clambering over a fallen tree, the trapper, who led the way, broke through the rotten shell, and pulled his foot back as if he had stepped into a rattlesnake's nest. "Look out there!" he yelled, "don't let them get away—there are young cats in that tree—jaguar-cubs, maybe; one of them tore my gaiters all to pieces. There they go—panther-cubs, by the looks of their fur."

Three yellowish-gray kittens, about the size of a pug dog, had darted out of the hollow log and made for the jungle, where two of them at once

took refuge in a low mango-tree, while the third and smartest crawled into a thicket of briars where we soon lost sight of him. The two in the tree saw their mistake when it was just too late; we had already surrounded them, and Benny caught the nearest with his crawfish-net, a sort of butterfly-catcher with a long handle, which he carried on all expeditions. The other tried to escape, but was collared in the act of sliding down the stem of the tree. They were too small to be very dangerous, and in spite of all their spitting and clawing, they were soon overpowered and stuck into the sack where the pigs had this time good reason to squeal, for the trapper's torn gaiters showed that the little scratch-paws knew how to use their weapons at short range.

Before we reached our camp in the ruins of Las Vegas, we met one of the Indians, who kept his promise by delivering to our guardianship a funny little youngster of the Tamarin tribe, a species of silky-haired, bushy-tailed little dwarf-monkey. The trapper had no use for him, so we put him in the cage of our old Satan-ape, and procured a special box for the panther-kittens. When the monkeys saw them, it was curious to watch their growing excitement. At first they merely made faces at them, as they did at all new-comers, but something about the eyes and claws of the little felines seemed to tell them that they belonged to the race of their enemies, and after scrutinizing

them more closely they suddenly retreated to the further end of their cage, and putting their heads together, began to chatter mysteriously, as if they were exchanging their suspicions about the moral character of the two strangers.

In the short time of our sojourn at Las Vegas, we had made many friends, to judge from the number of Indians who crowded around us when we repacked our mules; some wanted to stuff our baskets with fruit, and others with fish, but none of them objected to accept—little keepsake, as they called it—a silver coin, or a few glass pearls.

One old native, indeed, asked us bluntly to hand him two large glass buttons, as his eyes were getting weak, and he must have some good-sized object to remind him of his dear white friends.

"Could you fetch us a few good-sized bananas?" asked the captain, who made it a rule not to encourage any downright beggary. The old inhabitant scratched his ears. "I'm so old, I'm getting a little hard of hearing," he remarked.

"If his ears and eyes are weak, his voice isn't," said the trapper. "The day after the storm, I heard him sing in a way that beat all the bullfrogs in the Tocantins. Tell him to sing you a song for two buttons."

This time the veteran happened to understand us, and offered to sing the grand war chant of the Guchacurra Indians, but stipulated that half the premium should be paid in advance. For fun's sake, we let him have a button, but we got more than we had bargained for. The minstrel slapped his knee with both hands, and broke forth in such a monstrous howl, that our mules reared up with snorts of terror, and before we could calm their alarm, we had to give the performer the other button to make him finish his hymn.

CHAPTER IX.

A PERILOUS ADVENTURE.

The chief wonders of the South American Continent are its active volcanoes. From the ridge of the Organos Mountains, forty miles west of Las Vegas, we had a full view of the Upper Andes, with their icy summits and wild precipices, but their magnificent scenery did not occupy our attention half as much as the barren basalt ridge where the peak of El Cayo lifted its smoke-crested summit. Towards sunset the smoke-cloud assumed a reddish hue, and the next morning the effects of the volcanic fire could be seen by the broad streaks of black rocks where the snow had melted during the night. From all we had heard about

the frequency of earthquakes in these mountains we expected every moment to feel the ground tremble under our feet, and our little madcap Monito was almost sorry when we reached the ridge in safety; but before we came to the west side of the pass, we had another kind of adventure that rather satisfied his predilection for perilous scrapes.

We had just emerged from a winding defile when we heard a rattling noise above us, as if a



A CONCERT IN THE TREE-TOPS.

troop of deer were galloping along the craggy slope, and in the next moment an avalanche of loose rocks came tumbling down the cliffs and routed us as if we had been charged by a regiment of cavalry. Our horses galloped wildly out of the way, while we rushed left and right towards the shelter of the next cliffs, and our guide barely escaped with his life by grasping the branches of a hackberry-tree and drawing himself up, while the bounding rocks passed under his feet. A minute later all danger was over, and the whole trouble had probably been caused by a landslide from the slope of the upper tableland, where the recent rainstorm had turned every ravine into a mountain torrent.

(TO BE CONTINUED.)

WHAT TO DO ABOUT IT.

LULU. 1. "Where can I find the best description of Westminster Abbey?" In Dean Stanley's "Memorials" of the great abbey, which he knew better than any man living.

2. "Is there a book on Noted Women of to-day?" Mrs. S. J. Hale wrote a book thirty years ago on Noted Women of the time, but there are too many noted ones now to go into the largest encyclopædia ever handled.

MAY. Agnostic, as now used, means one who believes nothing on the strength of revelation, or the authority of the Bible, but requires doctrines to be proved by scientific or historical proofs. It expresses simply the last and fullest form of unbelief.

A. L. C. The Rev. T. Harrison, otherwise known as the Boy Preacher, has had a certain celebrity for which you need have little curiosity.

MAGGIE AND OTHERS. For the last time, The Wise Blackbird answers that horsehairs will *not* become snakes under any circumstances whatever, and henceforth all questions on this topic, as well as for cures for pimples and blackheads, are ruled out of this department.

SALLIE can be rid of the large hair mole which troubles her, by the new process in which fine needles connected with a battery pierce to the root of each hair, and a weak current of electricity destroys it. But the operation can only be performed by an expert surgeon, and the price of such a cure is high. Fifty dollars is the price for removing a slight penciling of hair from a lady's upper lip.

H. P. X., who wants to grow thin without pinching herself, is advised to get Banting's Letter on Corpulence, which any bookseller can procure for twenty-five cents, and study it. Hot baths twice a week, frequent change of clothing next the skin, plenty of out-door exercise and plain food, mostly of hard bread and dry meats, without milk, sugar or potatoes, will reduce superfluous flesh in most cases.

BETH has read *Our Mutual Friend*, by Dickens, and wants to know what use the piles of ashes could be which John Harmon left to Mr. Boffin by the will Silas Wegg found. "If they were nothing but ashes," she asks, "what worth could they be to him?" Beth does not know the value of even house dust and ashes, which are in demand for garden purposes and filling up sunken ground in or near cities. The dust mounds were so much portable property, worth several hundred pounds, let alone the chance of finding a fresh will or hoard of money, which John Harmon, the miser, chose to hide there.

DITTY. 1. "Was the serial story of *The Dogberry Bunch*, in the WIDE AWAKE, ever published in book form?" Yes.

2. "Where can one get fans mounted on sticks, and how much will it cost?" Any dealer in fancy goods can direct you to some one who mounts fans. The price depends on the delicacy of the mount; a chintz fan can be mounted for one dollar, a lace one will cost ten dollars; where the material is sent with the order.

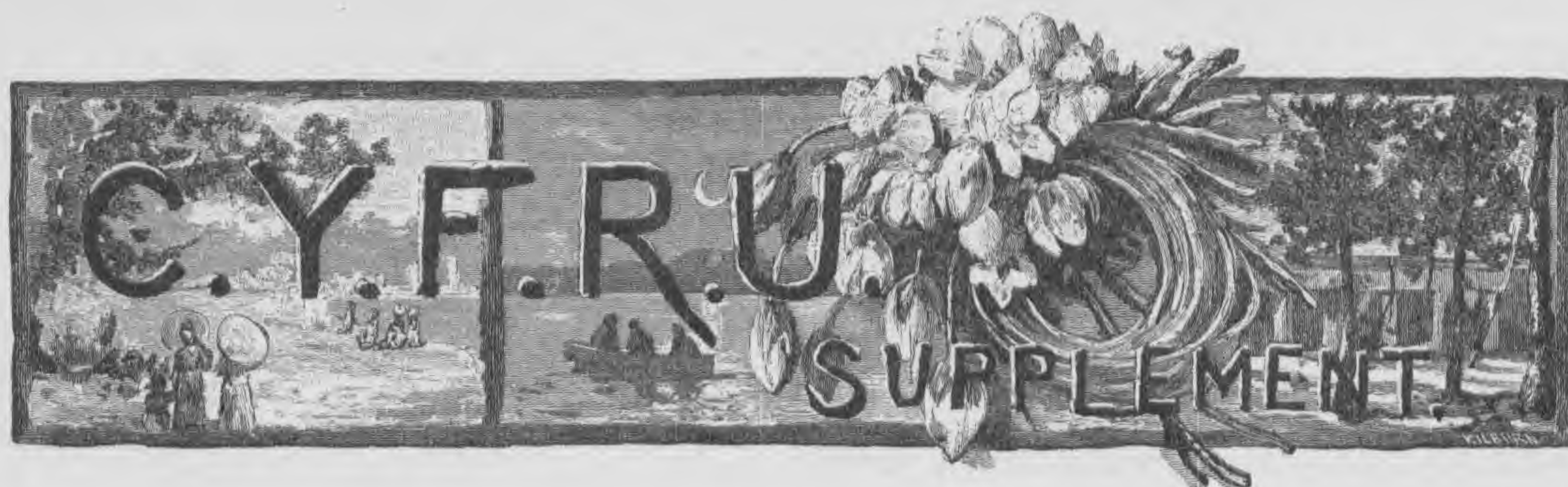
IDA T. wants to know what she can make in the shape of something ornamental for the room of a gentleman who is already furnished with a whisk broom holder, slipper case and shaving paper case, lambrequin, pin cushion and mats for his bureau. Embroider a large square of dark bronze or terra cotta felt, for a writing mat to lay on the table; work the stripe for back of a Turkish chair, or decorate a match set, with sandpaper and refuse box; work or paint a box for postage stamps; braid a mat for the bedside; embroider a two inch band of satin for the heading of a photograph frame. Embroidered blotting cases, collar boxes, cravat boxes, calendar frames, pen racks and handkerchief sachets remain to be furnished this destitute friend. A splasher for the wall above the washstand, would be most acceptable, made of white enameled cloth or rubber cloth, bound and decorated in color to suit the rest of the room. I have one parting hint for Ida and others, never to use that crowning vulgarity of expression "lady friend" or "gentleman friend," which is heard only from the lowest or most careless speakers. Say a friend of mine, and let the pronoun following decide the sex, or simply say, a gentleman, or a lady, and do not parade the fact of friendship. As a knowing collegian of the sort whose opinion would have weight with schoolgirls remarks: "If there is anything sappy and girly-girly, it is to hear a 'teener' talk about her 'gen'l'm friend,' and I always expect to find her chewing gum into the bargain." With its burden of truth and horrible slang I leave to make its deep impression where needed.

DOROTHY W. 1. See answer to Maggie. 2. *Dood* is the accepted pronunciation of the word you want.

Joy L. C. and others whose hair falls out, and collects dandruff are advised to wash the head with carbolic soap or borax and *hot* water, weekly, rinsing and drying the hair well before putting it up. Brush it daily for ten minutes.

B. O. B. Chloride of cobalt is formed by dissolving cobalt in hydrochloric acid, with liberation of hydrogen.

THE WISE BLACKBIRD.



TALES OF THE PATHFINDERS.

BY ARTHUR GILMAN.

V.

STAMPING A FRENCH NAME ON THE MAP OF AMERICA.

WHO puts names on our maps? Did you ever think? If you could have looked into a certain house in the wastes of Nova Scotia one winter day two hundred and seventy-seven years ago, you would have seen such a man. Let us take a glimpse of him through the spectacles of the fascinating historian of "The Pioneers of France in the New World." We must, however, look on the map of Nova Scotia first, to see just where the place is of which we are speaking. There is a great arm of the sea called the Bay of Fundy. It has rather a droll or "funny" name, some of us think. It is a corruption of the one the French stamped upon it years ago. When a name is stamped on a coin it does not always remain clear and readable, and thus it is with the names given to bays and towns and lands. The first settlers of Canada called the region New France, but few think of that name now. They sailed up to the end of the Bay of Fundy and named the waters there *la Fond de la Baie*, which is the French for the bottom or end of the bay. After a while people began to call it "Fond d'la Baie," then "Fondy Bay," and at last, "Bay of Fundy," which means nothing at all. In the course of time the name was given to the whole body of water.

On the western shore of this great bay you will notice a narrow inlet admitting ships to a great sound called Annapolis basin. On the shore of this basin, at about the present site of the town of Annapolis, there was, at the time of which I am writing, a fort called after the body of water on which it lay, Port Royal. There was a quadrangle of wooden buildings enclosing a large court, protected by palisades and by cannon mounted on a

bastion. There were such storehouses and quarters for soldiers as one often sees connected with fortifications, though they were rude and new. There were garden patches, and that sad necessity, a cemetery, and beyond that the ground was marked by the decaying stumps of the trees that had been cut for the purposes of the fort and the buildings connected with it. It was not an attractive place on the outside.

Let us open the door of one of the buildings. It is a dining-hall, and there are tokens that a feast is soon to begin. It is noon. A procession appears at the hall door. A French "Grand Master" leads. A napkin is thrown over his shoulder, the staff indicative of his office is in his hand, and about his neck is displayed a costly collar—the collar of his "order"—for he belongs to a brotherhood established here in the wilderness. Each member of the order follows, bearing a dish which he places smoking on the table. When all are in the room, we find that there are fifteen Frenchmen, a few Indian chiefs, invited by them, and, about the room, crouching perhaps in the corners, are Indian braves, squaws, and even children, looking with pleased expressions of anxious hope for the coveted luxuries that they expect to drop from the well-furnished table into their hands; for they know that the gay feasters have a kind heart for them on account of the help they give in hunting and trapping expeditions.

On this table might be seen from time to time all the juicy game of the northern forests, all the luscious fish of the clear waters of the rivers and bay, and the few vegetables that the new gardens, rescued from the forest, could afford. The fifteen men form the Order of Luxurious Leisure, or, as they expressed it in French, *L'Ordre de Bon-Temps*. They were Pathfinders in the woods of New France, but they did not think it necessary to give up all of the comforts of life because they were engaged in a serious work. It was the man who

stamped his name on our map who originated the new order. He knew how to manage men, and he made it one of the rules that each member should be Grand Master in turn, holding office but for a day. He ordained that this official should be autocrat in the kitchen and responsible for the dinners and suppers of the others, and thus he insured good meals every day; for of course each member wished to keep up his credit with the others and to make sure that *his* dinners should not be inferior to any that should be provided by his fellows. Was it not an ingenious device?

Breakfast and supper were not so formal as dinner, of course, but at night all gathered about the great fire on the hearth and talked as the flames crackled and the sparks thronged up the wide-mouthed chimney, seemingly hurrying to get out into the frosty air. The brown wild men of the forest wrapped in their robes joined as well as they could in the good fellowship, until at the evening's close, the Grand Master passed to his successor the collar and the staff of office, and pledged him in a glass of wine, for French wine was so plenty in the woods that there was always enough and to spare.

Spring came after that winter of festivity, and all were on the alert. They built mills, laid out gardens, enclosed larger fields, gathered turpentine, and engaged in all the processes of primitive agriculture, and in the works that were appropriate to build up a colony. It was not to be fair weather, however, all the time. Changes in France at last stopped all progress, and Port Royal was abandoned. I cannot tell its history, but in time it fell into the hands of the English, who called it Annapolis, in honor of Queen Anne, who then sat on their throne. It is a town of but a few hundred inhabitants now.

The Father of New France, as the founder of *L'Ordre de Bon-temps* has been called, was disappointed, but not disheartened. He returned home, and passed a year in the enjoyment of the social pleasures of which for three years he had been deprived. He was a romantic hero, reminding us sometimes of those we read of in the romances of the middle age, but he had hard common-sense and was earnest and persistent. He had come into existence so unobtrusively that no one knows now even the year in which he was born, nor what his ancestry was. He did not get a very good education, and seems to have spent his early years in the employment of a seaman.

After a while he entered the navy. He was some twenty-three years old, according to the pretty careful guesses of historians, when the celebrated battle of Ivry was fought—that battle which gave Macaulay the text for his stirring ballad. I have had to stop to read it myself as I have been writing this, it stirs me so with its fire.

Now let there be the merry sound of music and of dance
Through thy cornfields green and sunny vines, O pleasant
land of France!

War continued a long time after the battle of Ivry before there was peace in the "pleasant land of France." It was nearly eight years before Henry the Fourth could look with satisfaction upon his goodly land, before the people could feel the pleasure that came to them at the close of the war in 1598. The Father of New France had done good service for the king, and at the close of war found himself out of business. He had been quarter-master; but quarter-masters have nothing to do in times of peace. He looked over the maps of the world, to see whither he might go for the work he delighted in. He reminds me again of those knights of the middle age, who were ever on some "quest," as they called it, and never satisfied to be at rest and in peace.

The West Indies proved to be the region that seemed desirable above others for his purpose, and he thought over plans whereby he might get there and make an exploration that would do service to France. It seemed no easy task, for Spain was rich and strong and held the West Indies firmly in her grasp. However, our hero found a way, and sailed thither on a January day in the year 1599. I cannot tell you all that he did on this remarkable journey, but I must say that he went further than the West Indies. He crossed to the mainland, visited the city of Mexico, and made many interesting observations on what he saw. After two years' absence, he returned to France, and made a report, probably to King Henry of Navarre, in which he advocated the building of a canal across the Isthmus of Darien, and objected to the Spanish mode of trying to convert the Indians at the risk of killing them in the attempt. Nothing came directly of his report, but his journey gave him a reputation as an explorer, and he was soon asked to accompany an expedition to that portion of the New World that had been visited in 1534, by another Frenchman, Jacques Cartier. Six months only were occupied in this expedition, and when it reached France on its return, with a careful account of the region of the river St. Lawrence, and with specimens of the Indian inhabitants, a great interest was excited in the New World.

With added experience came a new demand for his services, and in six months more he was on his way back again. This was in the spring of 1604. In September, he discovered an island which he named, from its barren mountains, *Monts Déserts*, or, in English, Waste Mountains, which has become one of the most popular of the summer resorts of the North. There is little in its aspect now as the sailor approaches it, with its great hotels, cosey cottages and pretentious mansions to make one think of it as a desert, and yet if I were there, I am sure I would like to remember

how the ships of the founder of New France sailed by the spot two hundred and eighty years ago, and stamped upon it the name that remains still. Notice that he did not give it his own name, and I have not yet told you what his name was. He put his own name in but one place, and it was not a waste, but a place of loveliness. Let us see what he did after he had discovered the *Monts Déserts*.

The next year he started out on an expedition to find a pleasanter place for a home than those Northern shores promised, passing down the coast of New England. He sailed along slowly, stopping from time to time to get information of the natives, or to draw maps, or make observations of the country. He visited the Kennebec, sailed over Casco Bay, by Old Orchard Beach, and by Prout's Neck, where the Indians came down in numbers to see him and his men. He passed Cape Anne, and entered Boston harbor, where he landed on Noddle's Island. He went to Plymouth, and explored Cape Cod, which he called *Cape Blanc*, from the whiteness of its sands. Then he returned to the north without finding the place he had come to seek. He learned many things, however, and among them were the Indian method of cultivating corn, which is the same that our farmers now practice; the mode of making canoes of logs; and the way that codfishes were caught in Boston harbor. The founder of New France made careful notes of all that he saw and heard.

The effort was renewed the following year, when the explorers sailed as far as Martha's Vineyard and Wood's Holl, but they went back this time also without accomplishing anything permanent in the way of establishing a home. In 1607, the year that Jamestown was settled, our hero went to France, but he returned in a twelvemonth, and went up the St. Lawrence to find a place to found a city. It was the last of June when, with a little band, he sailed up the broad river on his quest. It was a gay and happy excursion. At first the river was so broad that it seemed more like a bay. Its waters spread out from eight to thirteen miles, but at last they narrowed, and there, where a great rock frowned upon the sailing party, it was determined to begin the town. The now ancient city of Quebec was then founded. It was the third of July. The place was called by the Indians "Quebio," or "Quebec," which in their speech meant "narrowing," because the river so emphatically narrowed there.

Just as the beginning had been made, a wretched member of the colony, who had by some means influenced a few of the others, laid a plan to kill their leader, and enrich themselves with the property of the expedition. They were to make a confusion in the night, which they would take advantage of to give them an opportunity to strangle or shoot their leader. The secret came to our hero's

ears. He bravely invited the leaders in the conspiracy to come to a "party" on his barque, when he was to open some bottles of wine that he said had been sent to him. The heads of the conspiracy were suddenly seized and carefully placed in irons, at which, says our hero in his narrative, they were much astonished. The accomplices were awakened from their sleep on the shore, and promised pardon if they would confess. The chief conspirator was duly hung and his head placed on a pole, as a warning to all seditiously inclined. We know little of how the winter was passed in the new town, but there was no more trouble from conspirators.

When the welcome spring came, and the frozen



"THE POWER OF CIVILIZATION WAS ASSERTED."

river was freed from its bonds, the leader determined to start out again on his explorations, this time keeping his eyes open for a way through to China. The Indians about him agreed to be his guides, provided he would take their part against a powerful tribe known as the Iroquois, or Mohawks, which lived in Central New York. Little did he think of the consequences that were to follow his alliance in war with the Indians. Would he have entered into the agreement if he had been

able to look down the pages of history and see the pictures of massacres and bloody fights that were to follow in time in the struggles between the French and Indians on one side, and the English pioneers on the other? Let us hope that he would not.

Imagine the company that started on the new expedition. Bands of reckless Indians, armed with war-clubs of stone, with hatchets and stone-pointed lances, their faces hideous with war-paint, rending the air with the yell and the war-whoop, and waking the echoes with the roll of their primitive drums. In addition, there are eleven Frenchmen (armed with short matchlocks, which their companions expect will spread dismay among the enemies), who trust themselves among the blood-thirsty and unknown warriors of the woods. It is a curious party. Slowly they advance in their boats up the St. Lawrence, until they arrive at the mouth of the Richelieu River. They follow that stream until they hear the hoarse roar of a waterfall, though their guides, to lead them onward, had assured them of an uninterrupted passage with their boats. Most of the Indians had already turned their backs on the expedition, and now eight of the Frenchmen return to Quebec, leaving our hero with but two of his countrymen, to go on with the wild men of the forest!

The advance was tedious. At one time there was a halt to hunt and fish and rest in ease. At another, it was necessary to consult the "medicine man," who pitching his repulsive lodge in the woods, mumbled an invocation to the spirits, allowed himself to be seized with convulsions as he exercised his savage divination, and, as our hero thought, received the messages of the Devil.

Falls and rapids and every other obstacle to progress were at last passed in safety, and one July day the party passed into a broad expanse of water. It was a lake, but it spread out before

them like a sea. Forests of great trees fringed the shores. Islands of loveliness dotted the wide expanse of waters, and our hero felt that his toils had won their recompense. He said: "Here is the spot on which I will stamp my name!" And from that day to this the beautiful and placid lake has been called after him—Lake Champlain—for the discoverer whose name I have not mentioned until now, was none other than Samuel de Champlain. Ardent adventurer in distant portions of our continent, discoverer and founder, he had given his name to no portion of the territory that he had explored until now; and now he stamps it so firmly upon the water that time and changes have not been sufficient to wipe it out. France and England have fought on the bosom of that lake, and struggled for its possession, but never has any one thought of taking from its discoverer the name he gave it. Bloody battles have marked its shores, ships have hurtled at each other there, and cannon have roared on its placid surface. Men have sought its woods and islands for pleasure and for fame, but the name first stamped on it has endured!

The battle that was expected by the Indians came at last, but the two Frenchmen, by firing their rude guns, sent such alarm into the breasts of the enemy that they incontinently fled, and the power of civilization was asserted in the woods, though, alas! it was shown by the butchery of war.

Our story ends with the naming of the lake, but the hero of the first battle there lived long afterwards. He returned to France, married a young wife, came back to his wild domain, ruled, explored, fought, and finally died on Christmas Day in the year 1635. Mr. Parkman tells us that "His books mark the man, . . . all for his purpose, nothing for himself." He sought truth, fact, and he won fame.

IN CASE OF ACCIDENT.

BY DR. D. A. SARGENT.

V.

INJURIES TO BLOOD VESSELS (*Continued*).

MANY accidents occur to the skin and soft parts underlying, where there is not so much danger of hemorrhage from the injured blood

vessels as that the wound may not readily heal.

In this case the blood is sometimes poisoned, and the system is greatly reduced by its fruitless effort to repair the parts injured. As the manner in which wounds heal is often a matter of grave importance, perhaps a few words in explanation of nature's powers will be of interest.

HOW WOUNDS HEAL.

Nature attempts to heal a wound in two ways:
First, by primary union, or first intention.

Second, by secondary union, or second intention.

By the first method the wound heals quickly, without suppuration (the formation of pus or matter), and generally leaves but a small scar. This method of healing usually takes place where the wound has been made by a sharp instrument, and is in the shape of a fine cut or incision, where the edges of the wound can be brought together and kept quiet and free from injury and impurity.

The second method of healing usually follows wounds where the tissues are bruised and torn, the result of accidents from jagged instruments, splintered wood, explosives and machinery. Here suppuration takes place, pus and granules of new flesh are formed, and the work of healing goes on more slowly. This mode of healing may also follow a smooth cut, or any ordinary wound where are not the favorable conditions required for healing by the first intention. That is, when the edges of the wound cannot be brought together, and the injured tissues have been irritated by motion, jolting, etc., or the wound been exposed to dirt, and other impurities.

The physician always tries to bring about healing by primary union. Thus you see the necessity for using plasters, taking stitches, bandaging, etc., in order to keep the edges of the wound together, and how important it is to support the injured parts, and to keep them thoroughly cleansed. This last precaution cannot be dwelt upon with too much emphasis. How frequently it happens that a person who cuts his finger with a penknife, pricks it with a pin, or scratches it with a nail, is afterwards prostrated by blood-poisoning, and is obliged to submit to an amputation of the hand or arm, or lose his life. Sometimes the scratch from a finger-nail merely, may result in consequences which are equally serious. This is because some small particles of dirt, or minute organisms, such as are usually floating in the atmosphere, get into the wound, then into the blood, and so start putrefaction with its train of evil consequences.

Blood-poisoning is the bane and pest of the physician, and he takes every precaution to guard against it. The best way to fight this enemy is with carbolic acid, boracic acid, chloride of zinc, and other substances termed antiseptics. A *weak* solution (remember that they are poisons) of one of these important agents should be in every household. To cover the wound with a cloth saturated with one of these solutions will preserve the parts from infection, and after stopping the hemorrhage and bandaging, will be the best treatment you can render until the doctor comes.

CONTUSED AND LACERATED WOUNDS

are those in which a large portion of skin has been destroyed, and it is impossible to get the edges of the wound together. Dirt, shreds of clothing, splinters, or other substances, are apt to be found in these wounds, and they should speedily be removed. They should not be handled roughly, however, but should be washed out with clean tepid water. A pad of lint folded in three or four thicknesses should then be placed over the wound, and a bandage applied gently, as in case of incised wounds.

BRUISES.

Bruises frequently follow falls, and blows with stones or missiles, and may be quite serious in their nature, even though the outer skin may not be broken. The swelling which usually follows a bruise sometimes conceals a fracture, or a severe injury to the soft tissues. The immediate application of cold water, ice, or some evaporating lotion, such as water of ammonia, camphor, weak tincture of arnica, etc., is the best treatment for alleviating pain and hastening the absorption of the effused blood.

ACCIDENTS FROM MACHINERY.

In an age when nearly everything is done by machinery, accidents from this source are of frequent occurrence. Fingers may be cut off, limbs crushed, skin and muscles torn, etc., rendering immediate aid necessary to prevent the person from bleeding to death. In case of hemorrhage from any limb or part, follow the instructions given in the preceding paper. After the bleeding has been arrested, apply clean linen or cotton pads wet with cold water, and bandage lightly, to support the wounded limb or muscle.

ACCIDENTS FROM GUNPOWDER.

The flashing of loose powder, the explosion of fireworks, the bursting of powder flasks, guns, and small cannon, give rise to accidents more or less serious. In many cases the treatment of such injuries differs little from that of ordinary burns, except where powder has been blown into the face, when an effort should be made to remove it. In case of hemorrhage, stop it as soon as possible by means of cold applications, ligatures, bandages, etc., as previously directed. If fingers or limbs have been blown off, draw the surrounding tissues together, and cover the wound with linen or cotton cloth saturated with clean water.

In case of gunshot wounds, the treatment depends upon the extent of the injury. A rifle bullet, a charge of shot, or a blank cartridge will produce

different effects, depending upon the distance from which they were fired. At short range, the bullet and shot make a similar wound; at a longer distance the shot scatter and make several small wounds. When fired at short range, a blank cartridge makes the ugliest kind of wound, because both the wadding and powder enter the flesh and tear up larger surfaces.

Where a bullet, shot, or some wadding has entered the body it is necessary that it should be extracted. But this is a task that had better be left to the physician. The immediate treatment of gunshot wounds, however, should be similar to that of the wounds described. Stop the hemorrhage, if any, and cover the wound with cloth wet with clean water.

BITES OF ANIMALS, AND STINGS AND BITES OF INSECTS.

Bites from animals are supposed to be poisonous. Independent of this belief they may be treated as contused and lacerated wounds.

The bite of the dog is most common, and from the fear of hydrophobia, which usually follows it, is apt to be the most serious in its nature.

The bite of the cat, rat and horse are frequently as severe so far as physical injury goes.

Whether hydrophobia is caused directly by the bite of a mad dog or any other rabid animal, is still a disputed question. But as the consequences are so terrible, it is well to take every precaution.

If a person has been bitten by a dog suspected of being mad, lose no time in getting access to the wound. If in the arm or leg apply a ligature above the bite to retard the circulation, then attempt to suck the poison from the wound with the mouth, care being taken that the lips are not chapped or cut, and that the substances extracted

be at once ejected. If a physician is at hand he can cut around the edges of the wound and thus get rid of the poison. If no physician is near, the jagged edges, which are most likely to contain the saliva, should be burnt off with a red-hot, or better still, a white hot iron or poker.

The same effect may be produced by touching the wound with a stick of nitrate of silver.

The application of the heat or caustic should be followed by warm fomentations and poultices. Do not have the dog killed until it is proved beyond a doubt whether he be mad. The suspicion that would accompany his death would never be relieved, and would add greatly to the distress of the person bitten.

The stings of bees and hornets are quite common in this country, and are frequently followed by great pain and swelling. One of the best and most accessible remedies for insect stings is common salt and water applied freely.

The sting of the adder should be treated in some respects as the bite of a dog. Tie a ligature around the finger or limb, and apply suction to the wound. Follow this treatment with a poultice, and in case of vital depression support the system by the use of stimulants.

THE AFTER TREATMENT OF WOUNDS.

The after treatment of wounds frequently deserves more attention than the first treatment.

Poulticing, bandaging, dressing and cleaning the wound, etc., is almost an art in itself, and is of the greatest importance.

As this would naturally come under the attention of a physician, we will not consider it here.

Let it suffice to say that rest, cleanliness, a good diet, a pleasant room, and a cheerful disposition will add to the chances of a speedy recovery.

WAYS TO DO THINGS.

BY R. E. MILLER.

XIX.

A BOY'S RAILWAY AND TRAIN.

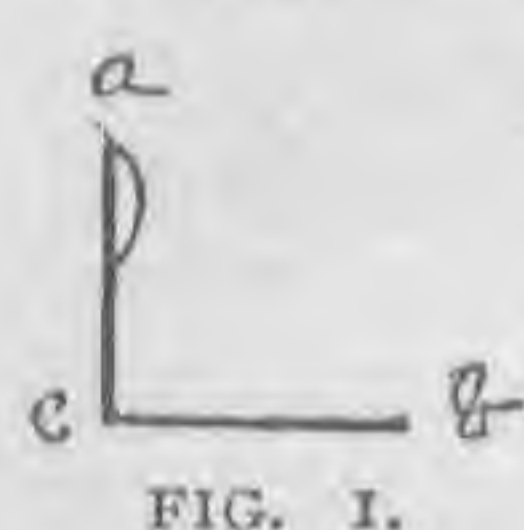
IN a certain old-fashioned house that I visit, a large attic is set apart as a playroom for the boys, in which to keep their tools, their jig-saw, and their treasures of all sorts, dear to the hearts of young people. All around the edge of this room runs a small railway with curves and switches

complete, with bridges and tunnels, and an elegant station, made of a deserted dog house, and painted in the newest style.

Over this track, propelled by boy-power, runs many times a day, a train of cigar-box cars, engine and tender, baggage and passenger cars, all in order. And everything about it, from the ties to the latest parlor car, was made by two boys under fourteen years of age, at a very small cost.

Now these boys are no wiser or more skilful

than other boys, and there is nothing about it hard to make. I thought many of you young readers of the WIDE AWAKE would like to copy it, so I have studied the thing, taken my instructions from the builder himself, and here it is, so plainly told that



no ordinary boy of twelve need make a mistake if he follows directions exactly, although to make it perfectly clear, I have to use a good many words which make it *look* hard. To begin with the track: first, come

THE TIES.

To make ties for a single track, take a board one inch thick. Saw from the end a piece five inches long, and split it with a chisel into ties an inch square. The number you will need depends, of course, upon the length of your road. Having these ready, the next thing is the

RAILS.

Buy at a tinner's sheets of tin which come fourteen by twenty inches in size, though any other size may be used. If convenient, have the tinner cut each sheet into eleven strips twenty feet long and about one and a quarter wide. You can, however, cut them yourself, with a pair of old shears, first measuring carefully, and ruling the sheet off.

Along one side of each strip of tin, near the edge, punch nail holes; one close to each end, and four between, making thus six holes about four inches apart.

To bend the rail to shape, take a ruler and scratch a line the whole length one quarter of an inch from the edge which has no holes. Lay this edge on a straight board, with the mark exactly on the edge of the board, so that the quarter of an inch sticks out beyond the board. Then tack the tin with two or three tacks, to keep it from slipping, while you take a hammer and pound the tin down over the edge till it is bent at a right angle to the rest. Then take out your tacks, and laying the tin on the board, pound this turned-up edge over till nearly flat. This makes the top of your rail, as you see in *fig. 1* (which shows the end of a rail) at *a*.

To make the bend *c* (*fig. 1*) draw a line the whole length half an inch from the edge where the holes are. Again tack the tin to the board, with the half-inch sticking out beyond, and pound this edge over into a right angle. This completes your rail, the holes being along the edge marked *b* in the figure.

TO LAY THE TRACK.

Place a number of ties side by side, and with a ruler and pencil draw two lines across them, three

and a half inches apart, having about three quarters of an inch beyond the lines at each end. These marks are to guide you in laying the track straight. When you have thus prepared a number of ties and rails, fasten them together by nailing, with small-sized carpet tacks, through each punched hole, on to a tie, being careful that the *end* of each rail reaches no more than half over its tie, so that the next rail may join on right. (*fig. 2*). The tacked edges of the two rails turn towards each other on the inside of the track, and thus do not show when a train is on, and the angle *c* rests exactly on the line drawn on the tie. Go on in this way till your rails are all used, or you come to a curve.

TO MAKE A CURVE.

Take a cold chisel, or an old common chisel, and one of your finished rails. On the flat side (from *b* to *c*, in *fig. 1*) cut slits reaching from *b* to *c*, and half an inch apart. Lay a row of ties in the curve you wish to make, and bend the rail to fit them. The slits will enable you to bend them nicely, on one side by gaping apart, and on the other by slipping over.

If you want a guard rail to keep your train from running off at this point, lay an extra rail fastened in the same way inside of each rail on the curve.

TO MAKE A SWITCH.

Select a point where two rails join, for a switch, and take one length of rail for the purpose. This length, which includes both rails, of course, is to be movable, and so must slide over the common ties, and not be fastened to them. To keep them in place they must be tacked to special ties, much thinner, and coming between the regular ties that they slide over. Having prepared this length, put a tack, smaller than the hole you have punched, through the end hole at *a* (*fig. 4*), so that the switch will move easily on it.

At *b*. (*fig. 3*), where your two tracks come together, you must put pegs (*b. b.*) to keep the switch from moving too far either way, and throwing your train off. Also, from this point, the ties must be long enough to hold the side track till it is clear of the regular track (*fig. 3*).

The curve of this side track is made, of course, by the directions for making a curve. The last special tie at *c* (*fig. 3*) must run out far enough to take a hold of, to move the switch.

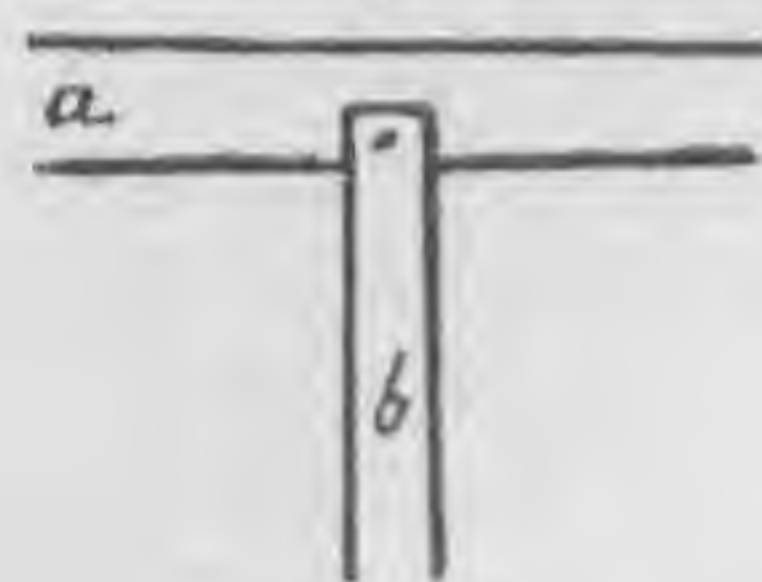


FIG. 2.

TO MAKE A FROG.

At the point where the rails cross (*d*, *fig. 3*.) you

will need a frog, to allow your train to go smoothly over. To make this, you cut your side rails square off at *d*, and begin it again on the inside of the

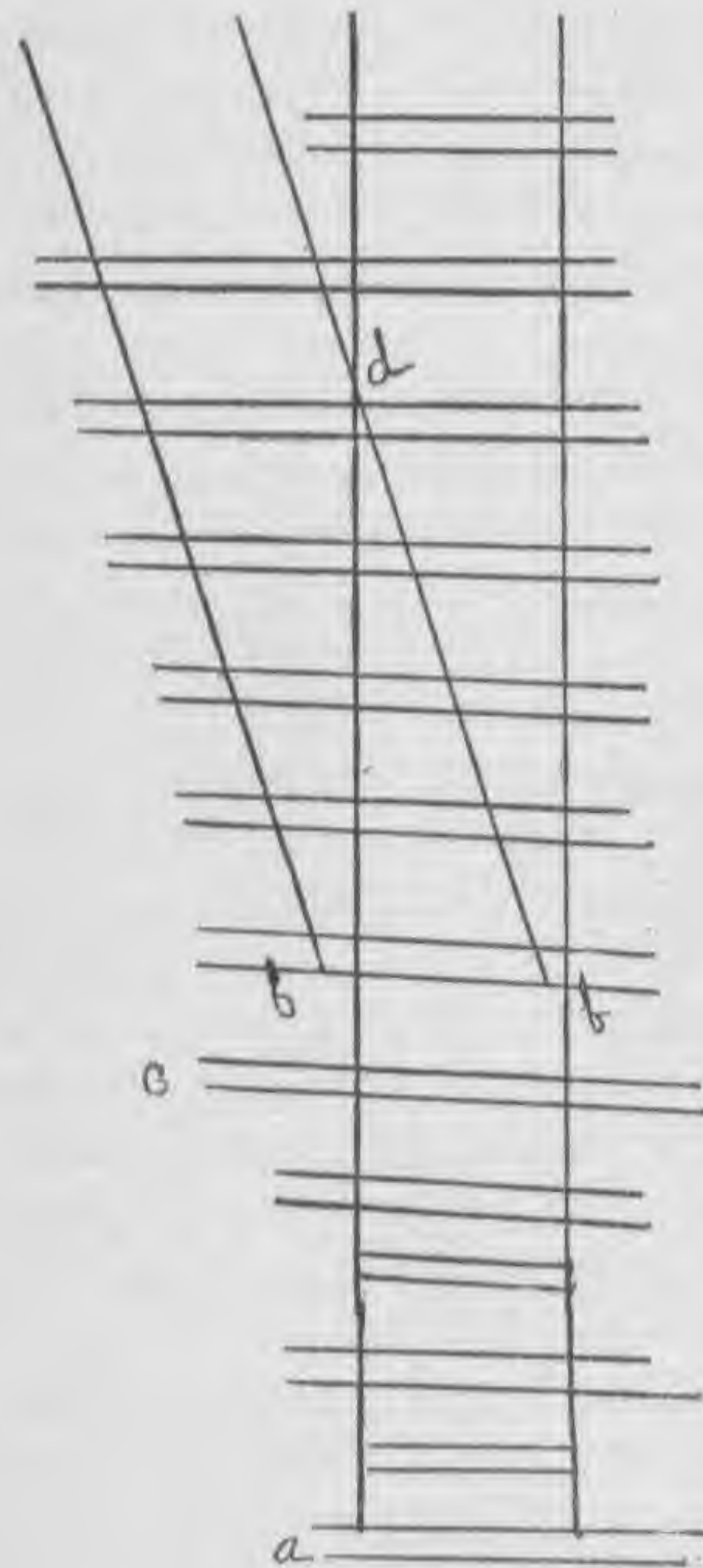


FIG. 3.

rail, leaving a space of a quarter of an inch open, to let the flange of your car wheels pass through. Also, you must cut a notch in your regular track at the same point, so that the wheels on trains switching off may go through (*fig. 4*).

Now your track is ready, you may begin on the train; and first, the trucks.

TO MAKE THE TRUCKS.

For wheels you need a lot of rather large spools with quite thick shanks, unless you can afford to have brass or wooden ones turned for you. The best spools come in the shops of New York, with French sewing cotton, and next

best are those which hold the knitting silk, so much used nowadays by ladies. Ask your mother and sisters, and all your fancy-work loving friends, to save their spools for you, and it will not be long before you have enough.

Saw each spool into three pieces, as at *a*, *a* (*fig. 5*). The outsides form the wheels with their flanges *c*, *c*, and the middle piece *b*, you will need later. For axles, the best are cheap lead pencils (cost one cent each), but you can use common skewers such as butchers use, whittled down to fit. The axles are to fit tightly into the wheels, and turn with them.

Now take a block an inch thick, four inches long, and two and a half wide, to hold the wheels. In each corner of the underside of the block, three quarters of an inch from the end, screw a very light wire screw ring (or screw eye) with a ring a half-inch in diameter. The axles run through these rings with the flanges of the wheels next to the block, to run inside the track.

Next comes the car itself.

TO MAKE THE CARS.

Cigar boxes are nice for cars, being already very neatly made. You can get at the cigar stores, at small cost, if not as a gift, any number of boxes with square ends, that is, with the ends of the box

as high as they are wide. After you have washed off the paper, get two boards, one a quarter or three eighths of an inch thick, and the other somewhat thinner, both being the width of the box. Saw off pieces three inches longer than the boxes, for platform and roof.

First fasten your trucks under the thicker board, which is the bottom. To do this, bore a gimlet hole exactly through the middle of each truck block; put a sixpenny nail from the bottom, first through the hole in the truck block, then through the cast-off part of a spool (*b*, *fig. 5*), or half of it if too thick, or a small twist spool a half-inch high. Nail one to each end of the board loosely, so it will turn.

Now, carefully take apart your cigar box, and mark on each long side a row of windows, like a passenger car, and in each end piece mark a door. Saw them out on a jig saw. (If you have no saw you can paint windows on the outside.)

After cutting the windows and doors, put the box together again, with the brads which held it before, and laying it on to the platform board, so that each end of the board projects for a platform, nail them together. Then open the cover (which must never be broken off) and nail the roof board on to it in the same way; that is, so it will project at each end. Use brads for this nailing. The object of fastening the roof to the cover is that you may open your car and fill it with passengers if you choose.

TO MAKE THE COUPLINGS.

Take pieces of stiff copper wire three inches long, and with pliers bend over one end of each to form a hook, and the other ends into a small ring. Turning your car upside down, lay one of these wires in the middle of the end, with only the hook sticking out, and fasten it by a small screw through the ring (*fig. 6*); do the same at the other end, and then with some small brass curtain rings,

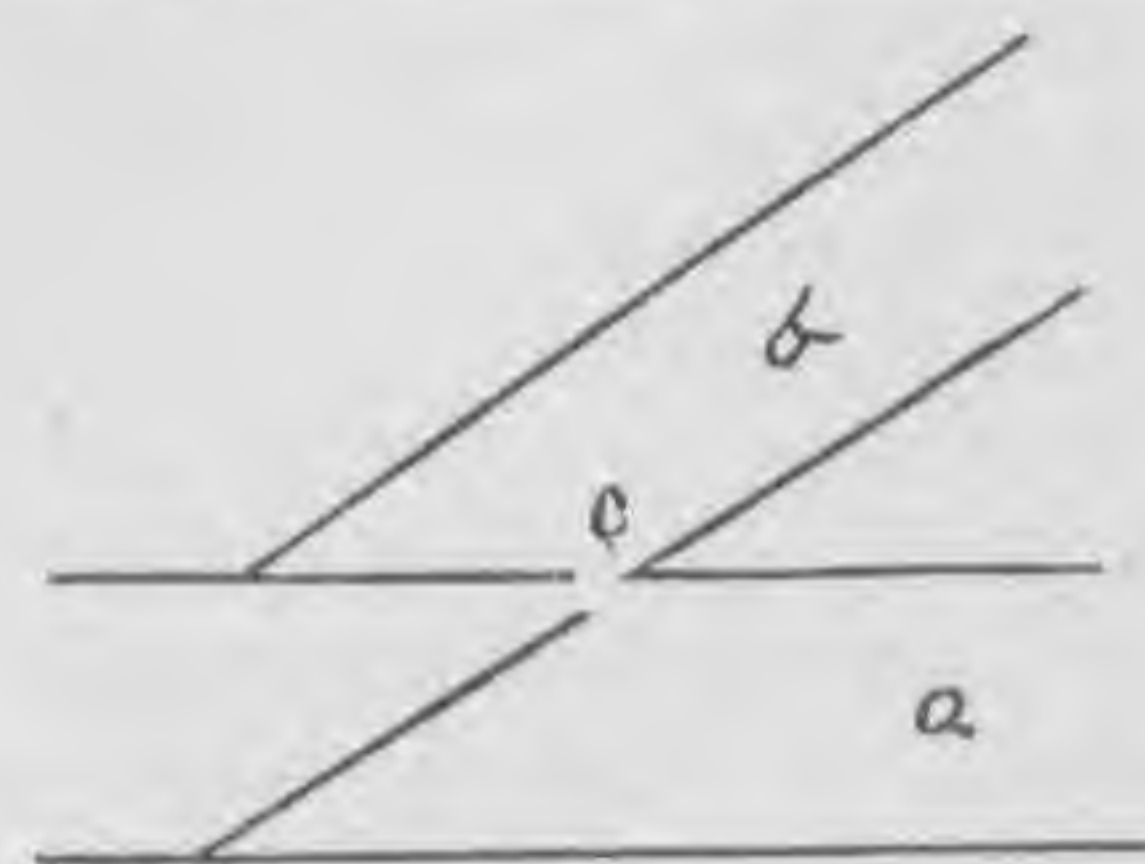


FIG. 4.

which cost two or three cents a dozen, you can couple your cars nicely.

Baggage and freight cars you can make in the same way, only cutting one large door in the side. You can make the cars as showy as you please, with paint of different colors, and finish them with a piece of muslin glued part way over the windows inside for shades. And now last comes the engine.

TO MAKE THE ENGINE.

For the foundation take a board one foot long, and three inches wide, which I will call the plat-

form. To make the boiler, have a cylinder turned of wood, two and a half inches in diameter, and eight inches long; or take a square piece of that size and shave it down yourself to a cylinder; or—what is less trouble, and costs little—have a tinner make one for you, open at both ends, of course.

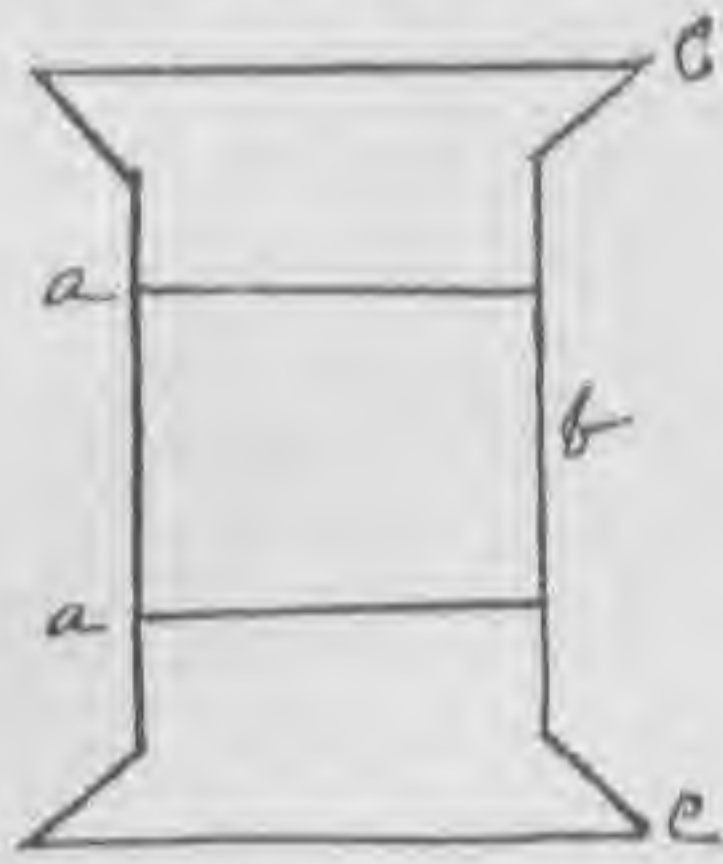


FIG. 5.

The one I will describe, since it is the most simple to make, is the wooden one. Nail it to the platform board in such a way that the board will project in front one inch. You will have to nail it from the bottom of the board. Now take a three-quarter-inch auger and bore a hole one inch deep, in the top of the boiler, one half inch from the front end. This is to receive the smoke stack.

To make the smoke stack, get a piece of dowsing three quarters of an inch thick, and four inches long, or use a bit of broom handle of that length. Shave the end down till it fits nicely into the hole on top of the boiler. Have it reach to the bottom of the hole, so as to be firm, and leave three inches standing up.

To finish the smoke stack, and make it look like the newest fashion in American engines, you must nail on to the top, with brads, a round piece of wood, a quarter of an inch thick, and a quarter of an inch larger all around than the broomstick itself. Behind the boiler

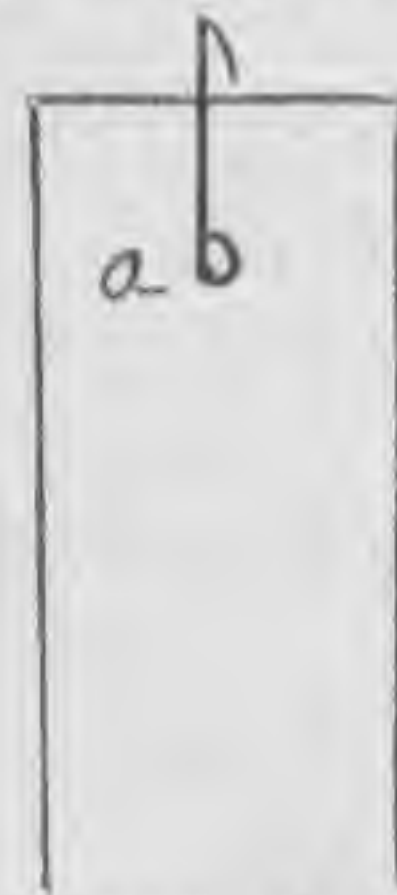


FIG. 6.

MAKE THE CAB.

This is a peculiar thing, and the boy builder of the cigar-box train insists that it must be done exactly as he directs, in order to make a really *proper* cab. To proceed, then:

For the front piece take a board a half-inch thick, three and three quarters inches high, and two and a half wide. Cut with a jig saw, near the top, two windows, one on each side, to overlook the engine. Nail this to the back end of the boiler, and to the floor. Make the two side pieces of the cab of cigar-box wood three inches wide and four inches high. In these cut two windows, also near the top. Before you nail these side pieces on, make a third piece out of half-inch wood, two and a quarter inches long, by two and a half wide, and nail it with brads to the front piece of the cab, one inch from the floor, like a shelf. This is the real floor, and without it your cab will be a mere toy, and not at all the correct thing. Having this shelf in place, nail on your side pieces, both to the front piece, and to the shelf.

The roof requires a piece of thin board, two and a half inches wide, and four inches long, so that it will project one inch beyond the sides. Remember it must be put *between* the side pieces, and on

top of the front piece, and nailed with brads.

TO MAKE THE DRIVING WHEELS.

The engine wheels are four in number, made by sawing from half-inch board four circles four inches in diameter, and from cigar-box wood an equal number four and a half inches in diameter. Each wheel is double, you see, to form the flange which keeps it on the track. Nail with little brads, each larger circle on to a smaller one, so that the former will project equally all around. Then bore a hole exactly in the middle of each, and your wheels are ready. With lath nails fasten one pair of wheels to the platform board at the side of the cab (flanges inside, of course), and the other pair to the same board in front, and so far that the rims of the two wheels on one side will be about two inches apart.

TO MAKE THE COW-CATCHER.

For this very important addition to the engine take a piece of wood three inches wide and two inches thick. Saw it on *both* sides to a point (fig. 7). First shave it down on top so that it forms a sharp point at *b*, fig. 7. Then draw a line through the middle of the top (*a* to *b*, fig. 7), and shave down each side so that it shall present a sharp edge all around from *c* to *b*, and from *b* to *d* (fig. 7). Nail this to the front end of the platform board with inch-long brads.

TO MAKE THE TENDER.

This is very easily made of a cigar box, one of the low sort, the same width as your cars, but only half the height. Remove the cover and take out one end board. Put the box on a board a half-inch longer than itself, and finish with trucks as you did your cars.

At the back end of this tender—the closed end—fasten couplings like these on the cars, but to the engine it may be fastened by a common wire hook and eye. The hook being on the engine.

This completes your train, and if you wish to make a double track, you need only make your ties long enough to allow trains to pass, and then lay your tracks side by side.

With a little ingenuity, you can make bridges and tunnels, freight trains, and gravel trains, and can, in fact, increase your “rolling stock” to any extent.

I hope you will enjoy building this railway and train half as much as did the boys in the attic in New York City. With them the building and improving, the running of trains and the adding of new facilities, make a never-ending entertainment.

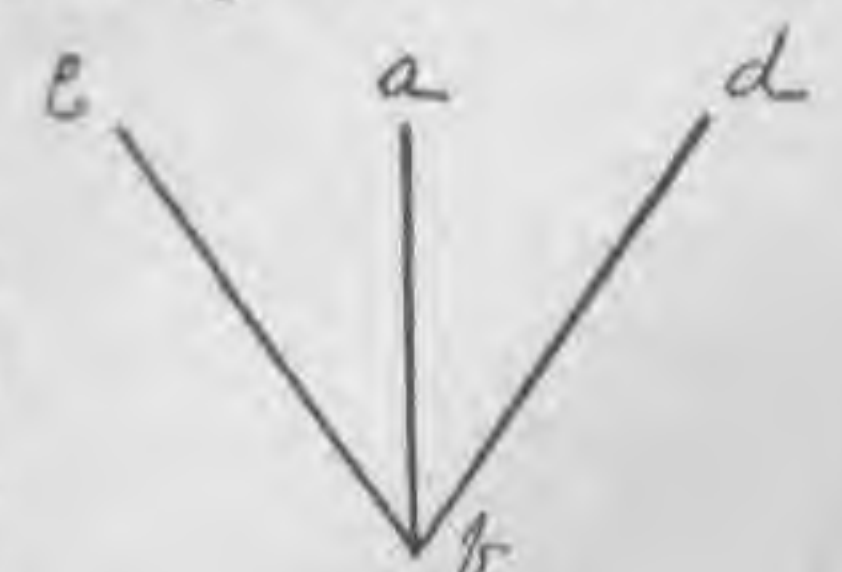


FIG. 7.

LITTLE BIOGRAPHIES.—HOW SUCCESS IS WON.

BY SARAH K. BOLTON.

V.

HENRY M. STANLEY.

ONCE on a time, had the wise men of the world been asked who were to be the great explorers of modern times, they probably would not have pointed to a factory boy in Scotland, ten years old, working fourteen hours a day, neither to a homeless lad in a Welsh poor-house—David Livingstone and Henry M. Stanley. But we may well say with President Garfield, "I never meet a ragged boy in the street without feeling that I may owe him a salute, for I know not what possibilities may be buttoned up under his coat." We all of us naturally enjoy adventure, and admire heroic adventurers. An unexplored region exerts a strange and drawing fascination upon the most sober-minded of us. The world's civilization hinges often upon this element in our natures.

There is a long, royal line of brave and hardy men who have given money and thought and life to open up new lands and enlighten new races; but through all the centuries of exploration there has remained, until our own years, a vast, unknown country, covering over eight million square miles—Africa, the Dark Continent. To be sure its Egypt had at one time been the centre of the world's learning; its Alexandria, at the mouth of the Nile, was as beautiful as Imperial Rome until Julius Cæsar conquered it, 48 B. C.; but under the rule of the Turks it had gone back into barbarism. To be sure along the east and west coasts the English and the Dutch had opened trading stations, but into the great pagan interior, believed to be inhabited by cannibals, and teeming with natural riches, no traveller had dared venture.

It was about one hundred years ago that England endeavored to send missionaries to the African tribes, but the malarial fevers were invariably fatal to life. This was well known to young David Livingstone, when, in the Scottish cotton factory, he resolved to go into the dark and terrible country as a missionary. He was twenty-five. He had for years worked from six in the morning until eight at night, his books before him on the loom, that he might study Latin and science while he worked, learning Greek, theology and medicine in his evenings.

For the next sixteen years he gave himself to mission work in behalf of the African heathen, and to exploration in behalf of the whole world.

Beset by strange hardships through tedious and difficult journeys, he penetrated the country, exploring the Zambesi and the lakes. He never felt fear. His manliness and kindness won him the friendliness of the terrible and pagan peoples.

He took constant and sensible care of his health. In the greatest hardship he never re-enforced his strength and spirits with stimulants; water was his only beverage.

When he visited home again, England and Scotland awarded the poor factory boy their greatest honors—medals, gold, and the applause of their Scientific Societies. He soon returned to Africa, however, this time sent by the Government and empowered to suppress the barbarous, the brutal slave-trade in Africa, carried on by Egypt, the Portuguese, and the tribes among themselves. Captured in the interior, these herds of human beings were bound together in gangs, the chains eating into their wrists, and were driven thus to the seacoast to be sold. In two centuries, it is estimated that forty million Africans had been sold into slavery.

On the death of his wife, the daughter of the Missionary Moffat, Livingstone once more returned to England, where he staid to write his second book, and then started for his last journey in Africa in 1866. He was determined to give the remainder of his life to this mission of Christianity and exploration. He was equipped better than a new man, by every year's experience. His constancy to his youthful purpose never wavered. It was not love of adventure, it was the noble zeal of exploration which had sent him forth in the beginning, the only sort of travel that really benefits the world, and is chronicled by history.

This time, for three years, nothing was heard from him. The whole world grew anxious. At last, while Royal Societies and Scientific Associations were debating, and Governments were delaying, a generous, energetic American, James Gordon Bennett, the owner of the *New York Herald*, resolved to find Livingstone, be he dead or be he alive. He quietly undertook this at his own expense. The chief question would seem to be, Whom could he send? There was, however, one young man whose dauntless courage and determination he could depend upon: Henry M. Stanley.

And who was Henry M. Stanley?

Born in 1840, in Wales, at three years of age, this Henry M. Stanley was sent to the poor-house.

There he remained for ten years. About that time in his life he shipped as a cabin boy, and came to America—to New Orleans. There he sought employment, and he must have shown some very good qualities, energy and ambition, probably, for he was adopted by a merchant named Stanley. However, a restless nature asserted itself, and presently he was off to see the world. He stopped for a time in Arkansas, living in a log cabin, and supporting himself in Thoreau-like simplicity, no doubt, as he had no settled occupation. His friends supposed him dead, when suddenly he appeared among them, having come down the Mississippi on a flat-boat. His adopted father died soon after, without having made a will, and the adopted son was again penniless. He now sought his fortune in California, among the miners and the Indians, and at twenty, having lived at the South, he naturally entered the Confederate Army. Soon, taken prisoner, and enjoying the stir of battle, he joined the Union Army, and was put on board a man-of-war, where he rose to the position of acting ensign.

The war over, and feeling no disposition for a civilian's life, he resolved to join the Cretans, who were trying to throw off the Turkish yoke. It was at this point in his career that he had the good fortune and the good sense to engage himself to the *New York Herald* as its correspondent. He now travelled widely in the East, showing both daring and good judgment in all his moves and adventures. Returning, he took in the poor-house in Wales on his way, and gave the inmates a good dinner and a friendly talk.

The next year, still turning his love of travel and adventure into business, he accompanied the English army against Theodore, king of Abyssinia, writing graphic letters to the *Herald*, and making a reputation for himself by sending news of victory to the English press before it was conveyed officially. The following year he was sent to report the civil war in Spain, where he showed the same triumphing will, the same quickness of decision, the same despatch, the same pluck and fearlessness, and always the same masterly common sense; whatever he attempted he was *sure* to accomplish.

One day as Stanley was sitting in his hotel in Madrid, he received a telegram: "*Come to Paris on important business.*" In two hours he was on the cars. There he met Mr. Bennett. Mr. Bennett said, "Draw a thousand pounds now, and when you have gone through that draw another thousand, and when that is spent draw another thousand, and so on, but FIND LIVINGSTONE."

What a tribute it was, that command! A laurel branch, a ribbon of honor. Mr. Bennett knew all the promising young men of the day, and he had chosen him!

On the sixth of January, 1871, Stanley reached

Zanzibar, an island off the east coast of Africa. From this point, he started off into the unknown country. He knew that money would be useless in the heart of Africa, as the natives do all their trading by exchange. He had, therefore, purchased three hundred and fifty pounds of brass wire, twenty sacks of various colored beads, and nearly four thousand yards of three different kinds of cloth, to barter for food and service. These goods, with his boat, etc., weighed six tons. With this baggage, his train comprised twenty donkeys, and one hundred and ninety men. He found his progress a proceeding of quite as much peril as he had counted upon. The roads were mere foot-paths. Trees were felled to make bridges across the streams. Now they waded to their necks in swamps filled with alligators, and now, often on their hands and feet, crept through miles of



HENRY M. STANLEY.

matted jungles, noisome with decaying vegetation. Whenever they halted for rest, loathsome flies, white ants and reptiles, crawled over them; while on the march, elephants, lions and hyenas were too plenty and too near for comfort. The water was so impure, also, that the donkeys died from drinking it.

What strange, ignorant, warlike peoples they found! Most of them lived in huts of mud and grass, crawling in through a single opening. They were naked. The women wore great coils of

brass wire about their necks, wrists and ankles, while their bodies were smeared with red paint and grease. Some of the men inserted the neck of a gourd in each ear; in these receptacles they carried tobacco and lime, obtained by burning shells, while the women pierced their upper lips, gradually enlarging the opening till they could insert a shell. Each tribe spoke a different language, and most were at war with one another. When they agreed to become friends they made a slight gash in the hands, or right cheek and forehead, and tasting each the blood of the other, become "blood relations!"

Sometimes these tribes fled at the approach of Stanley and his men; sometimes they gathered in great crowds to gaze upon them; and again, in war paint and feathers, with bells on their ankles and knees, flourishing battle-axes and assegais, they attacked the travellers like packs of wolves.

For eleven months the determined Stanley had led his men, sometimes coaxing the weary, half-starved ones, and sometimes whipping the insubordinate. The feet of some were bleeding from thorns, and others had fallen by disease. Not one word had yet been heard of Livingstone. Once the young explorer, alone with savages, was well-nigh discouraged, but he wrote in his journal: "No living man shall stop me—only death can prevent me. But death—not even this; I shall not die—I will not die—I cannot die! Something tells me I shall find him and—write it larger—FIND HIM, FIND HIM. Even the words are inspiring."

One day a caravan passed, and they asked the news. The reply was that there was a white man at Ujiji on Lake Tanganyika—he had just reached there.

Stanley's heart beat at the announcement.

"Is he young or old?" he asked.

"He is old. He has white hair on his face, and he is sick."

With enthusiasm, yet hardly daring to hope, Stanley pushed on, travelling night and day until they came in sight of Ujiji.

"Unfurl the flags and load the guns!" shouted Stanley, his nerves for the first time quivering with excitement. The Stars and Stripes floated out with the Zanzibar flag, and fifty guns thundered over the plain. They were immediately surrounded by hundreds of Africans, who shouted "*Yambo, yambo, bana!*" These were words of welcome.

Suddenly from the crowd a voice called out, "Good morning, sir!"

Startled by English words, Stanley replied, "Who the mischief are you?"

"I am Susi, the servant of Doctor Livingstone!"

Then a thrill went through Stanley's soul. The fatigues and the perils of the long, weird year were as though they had not been.

Susi ran back to his master, and soon the worn, gray-bearded Livingstone and the young American stood before each other. They clasped hands warmly, a strange tie uniting them at once.

"I thank God, Doctor, I have been permitted to see you," Stanley uttered from his heart.

"I feel grateful that I am here to welcome you," was the response of the white-haired man, who, without wife or children, receiving no letters for years, with food only for a month, was hoping against hope for aid.

For four months these two fearless men talked and planned and explored together, the one recounting his privations and disappointments, the other feeling that he must take up the work which the noble Livingstone would soon lay down forever. At length the day of parting came, for the great traveller could not be prevailed upon to go home, feeble though he was. His journals, in waterproof canvas cover, were sealed and given to Stanley, his letters written, supplies left him for four years, and then the two men wrung each other's hands in silence, and Stanley, with choking voice, gave the word to his men: "Right about face! March!"

Livingstone never looked upon a white face again. For a year he struggled on, fording the rivers on the shoulders of his men, till, too weak to walk, he was carried on a litter to the village of Illala. At four o'clock in the morning, May 1, 1872, Susi entered the doctor's tent to see if he might need something. The latter was kneeling by the bedside, as if in prayer, his head buried in his hands on the pillow, but quite cold and dead. For two weeks his faithful servants dried the precious body in the sun, and then, enclosing it in a bark case, daubed with tar (pretending to bury it, as the superstitious people would not let a dead body pass through the land), they carried it on their shoulders for nine long months, one thousand five hundred miles, over rivers and through swamps to the seacoast, where it was taken to England and buried in Westminster Abbey. The great of the earth gathered at that funeral. Among the pall bearers was the negro lad who had borne the body over the sea, Jacob Wainwright, and the young American, Stanley, but for whom Livingstone would probably have been buried on African soil.

Meantime Stanley had reached England, to find that after all his hardships, his statements about Livingstone were disbelieved. The delivery of the journals and the letters, however, proved the truth. The Royal Geographical Society then presented him with a gold medal, and the Queen sent him a gold snuff box, with "V. R." set in brilliants on the top.

But Stanley's work was far from completed. To his joy, the *London Daily Telegraph* now united with the *New York Herald* to send him again to Africa to continue Livingstone's work. He at once

bought one hundred and thirty books relating to that country, determining to know all that had been written concerning it. November 17, 1874, with eight tons of baggage, horses, dogs, and three hundred and fifty-six men, Stanley started, with his mind made up to cross the Dark Continent from shore to shore, and to solve that question of the centuries, What is the source of the Nile? A beautiful boat, the *Lady Alice*, was carried in eight sections on the shoulders of the men, and in the train was borne every appliance that could lessen or shorten the labors of their long progress.

And now began one of the most heroic, yet most painful marches in history. Losing their way, wandering in jungles and swamps, stealing aside to die in the brush, the company was reduced soon to less than two hundred. Once, when near starvation, two cubs were killed in a lion's den, and Stanley made a soup in a sheet iron trunk which he used to carry baggage, giving each of his men a good bowlful of lion broth apiece.

About four hundred miles inland, they were attacked by the natives, and twenty-five of the men killed. At Uganda, on the contrary, they were received with great state, and a present was made them by King Mtesa of fourteen oxen, sixteen goats, thirty-six fowls, and one hundred bunches of bananas. This man was a powerful, half-civilized emperor, governing two million people, with tens of thousands of soldiers. Four thousand five hundred women were attached to his household as servants. His palace was an immense, barn-like structure on the top of a mountain. Stanley translated the ten commandments for him, and through these he professed to accept the Christian religion instead of Mohammedanism.

In exploring Lake Victoria Nyanza, the treacherous natives persuaded the travellers to land, by holding up sweet potatoes as a sign that they were friendly. The moment the boats touched the beach they wrested the oars, and pointed their spears at Stanley's head. They then retired, saying they would speedily return and put him to death. Pulling some boards from the bottom of the boat, his men used these as oars, and rowed away just as the furious savages came yelling back to the shore. On a second exploring tour, to punish them, Stanley put their king in irons, killed forty natives, and wounded scores of others.

For over a year, sometimes in peace, sometimes in war, Stanley explored the inland lakes, learning, meantime, all the horrors of the slave trade—naked creatures driven into pens like cattle, and half-starved; their villages burned that they might be the more easily captured. Next he explored the Lualaba River, which Livingstone believed to empty into the Nile. Stanley found it to be none other than the Congo, ten miles broad at its mouth.

Stanley knew he had now reached the region inhabited by cannibals. But he did not quail among the monsters. Hiring four hundred more men, he commenced his journey. At first they could scarcely pierce the jungles; now they felled huge trees, and dug them out for canoes; now, unable to pass the falls, they cut their way four miles through dense forests, sometimes over mountains one thousand feet high; now exhausted, they sank down in the wilderness to die, watched by huge serpents. For four months they gained only about a mile a day, yet the intrepid leader toiled on, inspiring his heart-sick followers.

So superstitious were the natives, that, seeing him writing in his notebook, they said such black marks will bring disease and death upon the people, and the book must be burned. Stanley was now really aghast. Destroy the records of nearly three long years, and his maps! He could not fight now, for the great company had become reduced by death to only one hundred and fifteen, and nearly half of these were ill. He bethought himself of a similar book he had with him, and hastening into his tent, brought out a volume of Shakespeare, which he burned before their eyes, to their intense gratification.

And now the long journey across the continent was nearly over. When Stanley announced to the half-starved company that they were nearing the ocean, one poor fellow went crazy with joy, and shouting, "We have reached the sea; we are at home!" plunged into the forest, and was never seen again. As soon as tidings of their distressing condition could be sent, food was brought them from the coast. On landing, every kindness was shown them, and Stanley, true to his promise, took his natives back to Zanzibar, around Cape Town. When they reached home, they knelt on the beach, and cried "Allah! Allah!" as they bent their faces to the sand. When Stanley returned to England, the devoted fellows shoved his boat into the sea and then bore him on their shoulders out into the surf to reach it.

Well, the boy of the Welsh poor-house had come to world-wide fame! He had made that journey of over seven thousand miles in the heart of Africa, which he had planned; he had discovered that the Shimeeyu River, four hundred miles long, is the true source of the Nile, making it the longest river in the world; and he was prepared to show that this great land with its teeming millions was to be invaluable to the world's commerce.

Europe hailed him now. Humboldt, King of Italy, sent him his portrait; Victor Emanuel, his father, bestowed a gold medal; the Khedive of Egypt decorated him with the grand commandship of the Order of the Medjidie; the Prince of Wales sent his personal congratulations; London, Paris, Italy and Marseilles sent gold medals from their Geographical Societies; a dozen other cities,

like Berlin and Vienna, made him an Honorary Member of their largest associations; and best of all, he says: "The government of the United States has crowned my success with its official approval, and the unanimous vote of thanks passed in both Houses of the Legislature has made me proud for life of the expedition and its achievements."

Mr. Stanley is now back in Africa again; and under the International African Association, with Leopold the Second, king of the Belgians at its head, he is building a good road from the mouth of

the Congo, or Livingstone River, inland, in order to open the country to trade and civilization. He has established five trading stations already, the last about five hundred miles from the coast. De Brazza, in the interest of France, has attempted to forestall Stanley by gaining possession of the territory, but the latter has won the natives to his side, and has virtual control of the whole Congo route. Africa will have a great future, doubtless, and the boy of the Welsh poor-house, by his indomitable will and courage, has hastened the day by many and many a year.

ANNA MARIA'S HOUSEKEEPING.

BY THE NEXT NEIGHBOR.

XVII.

MAKING THE BEST OF THINGS.

YOUR little note slipped under the door last evening, on your way home from the druggist's, for Tom's toothache drops, came straight to heart and hand. You find home dull with the best care you can give it; and as you look round the shabby, commonplace rooms, you wish for some way of brightening them and brightening life together. Life seems rather "grubby" and tame to you, does it?—a common complaint at sixteen. In stories, you know, the young lady's arduous duty is to fill the vases and dust the ornaments, and I have seen young women who really thought they had made the best of their time when they had dawdled over cut flowers and china an hour of a morning.

In a world so full of novelties and delights as this, where there is so much to be done for one's self and for others, can one be satisfied with mere touches and glances like this? Well might a keen novelist of the day say concerning one of his heroines: "She was a lady, and nothing else—the most charming and useless of creatures." She was not a lady, *pur sang*, or she would have been good for something; at least as much as the French duchesses who fled to England in the Revolution, who made caps and mantles for a living, or gave lessons in drawing, and did these things very well too. They were taught to do everything better than common people, as became their rank. The Princess Louise of England is a lady, if you please, but not a useless one. In their toyhouse at Osborn she and her royal sisters were taught every detail of housekeeping from washing and

ironing shirts to cooking dinners and butter-making, under far more rigid inspection than you ever face, and she can decorate a room, or serve a supper skilfully, not disdaining any use of her hands to which hands can be put. The Prince of Wales very wisely insists that his lovely young daughters shall be taught different occupations as carefully as if they expected to earn their bread by them. They are to take their studies, he directs, as thoroughly as if they were qualifying for governesses, and their mother, the Princess Alexandra, who, if stories are true, used to sew on her own gowns, sees to it that they neglect nothing either pleasant or convenient for a woman to know.

Girls and women of a certain inferior turn of mind are fond of thinking of their place in life as the woman's kingdom, and of themselves as queens and sovereigns of home, which is about as far as these high-flyers can reach. These queens of the baking-pans and empresses of the pot-lids find it consoling to move about their little houses in a halo of imagination, much like the hired girl I knew, who confessed to wearing white satin and diamond earrings in fancy all the while her hands were in the dishwater, scraping the frying-pan with her finger-nails. I beg you to disdain such shams and affectations, and be proud enough to content yourself with the plain fact of being an American girl in modest circumstances, who is bound to make the best of everything with her own hands, and very thankful for the chance. You certainly can make your house interesting, and your busy life will keep you out of a hundred absurdities and affectations. The funniest of common things is the way a girl takes to copying a favorite heroine by little pruderies and primnesses, as if she were educating herself into finer ladyhood, and by

catching tricks of manner, she could imbibe a whole character.

If you ever resent the not over-pleasant duties which crowd out so many pleasant things, you may draw consolation from the letters of Mrs. Carlyle, who knew both sides of life. Brought up to elegant leisure, the only child of doting, well-to-do parents, and full of all the tastes which belong to a bright, accomplished, sensitive woman, she led the life of a poor man's wife for a score of years, bound to extract the utmost comfort and gentility out of a narrow income by the strictest economy and clever handiwork. Her letters to her old home friends are full of domestic affairs, notable cleanings and tearings-up when Mr. Carlyle was away, picking apart of mattresses, taking down bedsteads and soaking them to get rid of "beings," the bare idea of which sent her wild and Carlyle frantic, making of bed hangings, which with their linings and trimming were a heavy work in those days of hand needlework, with help of her hired girls who smashed whole tables of china and got too drunk to stand; how she swept and "black-leaded" grates, made the cold meat do for days to save cooking, and boiled the porridge for supper by the parlor fire to save trouble—all told in the liveliest fashion, with fun, temper, and often tears in the words. But with all her heavy load of unshared care, the genuine sense of the woman speaks out in words like these, written from the home of her wealthy relatives on a visit:

I declare, I am heartily sorry for these girls in this absurd, indolent way, sailing down the stream of time. How grateful I ought to be to you, dear, for having rescued me out of the young-lady sphere! It is a thing that I cannot contemplate with the proper toleration.

Brave little woman! She could paper, paint, scrub, and black grates, upholster and mend, even to cobbling Mr. Carlyle's cloth shoes all one New Year's Day, without over-much murmuring, but the aimless, endless young-lady life of dressing, sipping tea, reading a little, riding a little, and doing fancy work a little, filled her with disgust, as it must every capable woman or girl who feels in herself the ability for more than mere slipping through life the easiest way.

If you look at your housework as the means to a delightful home, it will not seem hard or hateful; even the dreaded sweeping day, which I own to liking worse than wash-day, leads to the repose of fresh, fragrant rooms, and sanctity from dust and defacement. It need not be quite so much a penance if you have proper aids. For a sweeping outfit you want several large covers of glazed cambric or chintz to throw over piano, sofa, and all the large pieces of furniture you cannot wheel out of the room. A bed cover is indispensable in sweeping chambers. The good old-fashioned ones used to be of nankeen, bordered with chintz stripes

and the size three by four yards, to envelop everything about the bed. At least you can use old sheets and newspapers to cover things, if nothing else is at hand. A carpet-sweeper you must have, not because it does the work easier, so much as that it prevents breathing dust, which is dangerous for the lungs. The common brush sweepers are better than brooms, but I prefer the Atmospheric carpet-sweeper, which has a fan in the box, that draws all the dust and lint into it without any brush to clog or wear out the carpet. It is pretty to see how it licks lint and threads from the floor, leaving Brussels or ingrain as absolutely clean as if it came from a steam cleaner.

A long-handled sweeping-brush for wood floors and mattings, and a long dust brush for cornices and lintels, make work easy, but you can do it just as nicely with a clean broom kept soft by dipping in boiling suds every week, and wrapping a clean cloth round the head of it for high dusting. A large dustpan with tall, upright handle, four feet long, saves much tiresome stooping, and is more desirable than expensive brushes, if you can't have both. Stiff manilla paint brushes to dust corners and tufted furniture, soft brushes for mouldings, and feather brushes for highly polished wood complete the outfit; but in place of these one manages very well with a five-cent whisk broom and a soft old cotton duster.

In sweeping a parlor, first put all the vases and small ornaments out of the way in a basket or closet, that they need not become indistinguishable with dust. Set all the furniture possible in the hall, and cover pictures, book-cases, clock and other things so closely that dust cannot sift on them, carefully wiping off dust that has already settled on them. With a clean brush dust the upper part of the roller blinds and draw them up to their full height out of the way. Dust over doors and windows before you sweep, not to have a double cloud to brush down afterward. If you sweep with a broom, use damp tea leaves, bran, coarse meal, sawdust or dry snow to keep down the dust, remembering to have these things damp, not wet; to sprinkle only a yard or two where you mean to sweep at once, and to take it up with the sweepings before you go to the next place. Brushing a damp mass of dust and trash over a whole carpet, is not the way to improve it. Fine carpets like Wilton or Moquette should be swept with the pile, to keep them from wearing; and dealers say that Brussels should be swept only one way. It is a good rule always to begin at the corner farthest from the door, taking up the dust every yard or two. Take rugs up, bringing opposite sides together, not to spill their dust; lay them face down on green sward, or hang them so out of windows and beat the backs till all the dust is out. Beating on the face sends the dust into the firm woven ground of the rugs. Let them sun for an

hour or two on the wrong side, then air in shade with the face up, finishing with a few minutes' broad sunshine to take out the smell which clings to fluffy mats as well as other unsunned carpets.

As soon as the sweeping is done, open all the windows wide to let as much dust blow out as may be, but keep the doors closed which lead to the rest of the house. While waiting for the dust to settle, go over the furniture in the hall or on the porch, using the stiff brush or whisk on all upholstery, brushing crevices and tufts thoroughly, and beating the cushions with the flat rattan bat sold for the purpose in fancy shops. Use the soft brush or cloth only on wood, but don't go over things with a feather duster and imagine you leave them clean. The dust flies and settles elsewhere for you to breathe, and streaks are left in unlikely places. Use a slightly damp cloth to wipe off the dust, and carry it from the room. Read Miss Nightingale's *Notes on Nursing* if you want to know why a damp cloth is preferable to a flitting brush when dusting a room is in question.

The stiff brush comes in play for dusting window frames and baseboards *after* you have wiped the frames and swept the skirting with clean brush or broom into the dust-pan. Try to dust so that your cloth or brush leaves no soiled streak on paint or wall—a sort of shading not uncommon in easy-going houses. White spots on varnished furniture can be rubbed off with alcohol, kerosene, or a little wet ashes. Ink can be scoured off with sapolio, or if the wood is deeply stained, dilute vitriol and wash the spot many times, letting the liquid, which is dangerously caustic, soak in. Put a few drops of furniture polish on a woollen cloth and rub the chairs, first washing smears off with kerosene, which also improves varnished wood.

Keep glue, shellac, varnish, a little white paint and brown or oak stain ready to touch up furniture and woodwork. It looks shiftless to keep a dozen broken things about till it is worth while to send for a repairer, when every boy and girl of twelve can use glue and varnish as well, if they only learn. If the mirror frame is shabby, regild it with the materials which come ready for use, at fifty cents a box. If it is too far gone, paint the whole frame over, black, brown, deep red or white. If the grate frame and hearth are rusty, japan them with the black varnish any dealer will furnish for twenty-five cents, and give the coal-scuttle a coat while you are about it. Is there grease on the marble of bureau, table-top or mantel, try sapolio on it first, and then a paste of slacked lime and potash, which will draw the worst grease out of stone or floors. Is the wall paper torn, paste the loose end at once; if soiled or torn off, cut a square piece to match the figure exactly, and paste over the blemish. Fill holes in the plastering with plaster of paris mixed thick with water, smoothing with a knife. If the carpet shows

grease spots, rub hard soap on them, and wash off with crash, rinsing with lather, and rubbing hard with dry crash. This will seldom hurt the colors, if quickly done, using but little water. Rub rust off the stove with sand paper or the kitchen burnisher, *i. e.*, the steel pot cloth, before blacking it.

You would like to know how to make your sitting-room look cosey and "livable," and want some hints for the arrangement of furniture. A family room needs certain things to be inviting, one of which is a long lounge, not the wretched little parlor lounge that is neither good to sit or lie on, but a generous home-made one, with pillows, for tired people. Doctors say one can rest more lying down ten minutes than sitting down an hour. Next you want easy-chairs, Shaker, cane seat, rattan, wood or upholstered, it matters not, so there is a comfortable seat for each of the family. A wide round table where all can find room for work or books is desirable, for it gives all an equal chance, and is more inviting than other shapes. A cloth is in the way for an evening table. A book-shelf, not a book-case which takes room, wide, plain brackets and broad window seats for flowers, a clock, and clear glasses for bouquets, will be the furnishing strictly needed.

Scrupulous neatness is to be the first charm of your rooms, which in showy upholstery or bare plainness, is distinct and attractive as the scent of lavender. Beside this, the secret of a pleasant room lies in what aunt Jane would call "having things correspond," or what an artist would call the unity of things—what old Caleb who "chores round" would say, unhesitatingly, was the keeping of things. You want a room mostly in one color or shades of a color. Perhaps you can't do much more in this way than to avoid green and red tidies, and lamp-mats, or purple mats and pale blue tidies and deep blue vases, with bouquets on the front, to go with a scarlet and wood-color carpet. You can't get over the carpet, as you can't afford a new one, unless you take the bold step introduced by modern taste, and have it dyed deep red, brown, or deep blue, when the most obnoxious colors come out in different shades, making a fair artistic carpet. If I had an ugly carpet, I would treat it to a bath of madder dye, laid on scalding hot with a brush, before giving up the question. Dreadful, many-colored mats and cushion covers can certainly be dyed, and ten dollars in paint and dyeing will go farther toward making a really agreeable room than a hundred in common furnishings. A coat of pinky white or pinky drab paint mixed with varnish, laid over doors and common furniture would harmonize with your madder red or brown or deep blue carpet, and when you "do up" shades and curtains next, try a few drops of cochineal in the starch, to give them a pleasing tinge. You don't begin to know the resources of simple things.



TALES OF THE PATHFINDERS.

BY ARTHUR GILMAN.

VI.

THE HERMIT OF SHAWMUT.

A GREAT poet has told us that to be truly alone one must roam the streets of a great city, "midst the crowd, the hum, the shock of men," where there are "none to bless us, none whom we can bless," where every one is intent upon his own affairs, and not a soul can stop a moment to think of the solitary just at his side. He says also, on the other hand:

To sit on rocks, to muse o'er flood and fell,
To slowly trace the forest's shady scene,
Where things that own not man's dominion dwell
And mortal foot hath ne'er or rarely been;
To climb the trackless mountain all unseen,
With the wild flock that never needs a fold;
Alone o'er steeps and foaming falls to lean;
This is not solitude.

There lies before me a great city. It clusters about the foot of certain hills, and its greatest edifice crowns the summit of the tallest of them, throwing back the warm rays of the western sun from the rounded outline of its golden dome. Thousands and hundreds of thousands of men throng the streets. Can it be that one among all these feels more lonely than the first man who built his little cabin on the spot when all was wild and nature reigned over the hill and the shores of the sea that washed them?

What an interest surrounds the first man to do anything, or to establish himself at any particular point! How we search records to find out who has been before us, and how triumphant are we when we make a discovery! Could we now give the name of the man who, first of all, lived on the site where London stands, with what sentiments of reverence would we not gaze upon the record of his life!

We are fortunate enough to know the name of the first man who lighted a fire on a hearthstone

in the city I am thinking of. When the smoke rose from his chimney, it was seen by none but Indians and the wild beasts of the surrounding forest.

It is not often that a single man settles alone away from his fellow men and builds himself a home for meditation as this man did. There is generally some romantic reason for his act, if he does so; and, in our case, we shall find ourselves wondering why a man like this one should have made himself an exception to the general rules of human action. He is introduced to us as sitting alone upon the summit of Shawmut, the site upon which Boston was built. It was Beacon Hill from which his eyes gazed across the harbor to the broad Atlantic, over which he had come from his native England. Was he longing to return? I am sure that he did not entertain any feeling of that sort. He rather said to himself:

There is a pleasure in the pathless woods,
There is a rapture in the lonely shore,
There is society where none intrudes,
By the deep sea and music of its roar:
I love not man the less, but nature more,
From these our interviews, in which I steal
From all I may be or have been before,
To mingle with the universe, and feel
What I can ne'er express, yet cannot all conceal.

What caused this man, William Blaxton by name, to leave his native England, and seek a home alone on the slope of Beacon Hill? He seems to have arrived some four years after the Pilgrims had established themselves at Plymouth. He was about twenty-five years of age, a graduate of Emanuel College, Cambridge, and a clergyman of the Established Church. Had some disappointment caused him to leave his home — to exchange its comforts for the privations of the wilderness? Did he come for the purpose of quiet contemplation and study? Perhaps both reasons influenced him. He had with him a library of some value. It contained English books in folio, Latin books in folio, in large quarto and in small quarto, and

some manuscript volumes, which would be of the greatest interest to us if they had not been burned by the Indians.

How many years Blaxton lived without neighbors I cannot tell; but I know that in 1629 he had one named Walford, living in a palisadoed house on the spot where Charlestown now stands; and that a little later Samuel Maverick was to be found at Noddle's Island, now East Boston; and even earlier than that there had been an Englishman at Mount Wollaston, which he had called Merrymount.

The settler at the last-mentioned place had surrounded himself with companions. He did not come to America to get away from society, but rather to be free to behave himself as he pleased. He was a gay and, perhaps, graceless fellow, and his gayeties at last aroused the antagonism of the settlers about him, who sent the valiant Pilgrim, Miles Standish, with soldiers to force him to live more soberly. He had raised a Maypole at Merrymount, and with his companions he danced around it in a way that was not in accord with the views of the stricter settlers at Plymouth and Charlestown, who did not dance at all, and were a constant protest against the vanities and the license that they had come over seas to get away from. Those were stirring times in England at the epoch that we are considering. There was a war with France, and King Charles the First was in dispute with his Parliament. Oliver Cromwell was coming into notice — the man who was to direct the overthrow of the King, and his execution.

In the midst of the excitement, oppression and feeling of insecurity at home, there was a growing interest in new settlements in America, and at the same time that the King determined to rule without the help of Parliament, he gave to a certain body of men a charter to settle and govern a territory of Massachusetts Bay. The historian Bancroft says that the Puritans felt that they had "a summons from heaven inviting them to America," and they prepared to go there accordingly. A number had sailed in 1628, but the great movement began the next year. It was at the end of August that a dozen men of large fortunes and liberal culture met at Cambridge, England, and determined on certain conditions to go to the new country. The principal of these was John Winthrop, who afterwards became the Governor of the Colony, and directed its early history so wisely that it became strong and influential.

We have learned that on other occasions when expeditions were about to sail out into the broad sea there was much popular interest in the matter. The same was true now.

There were few persons of importance, as the world counts importance, among those who had left home to settle in America. The "Pilgrims," who went to Plymouth in 1620, made little stir by

their going, for they did not sail directly from England. They had been away already some years in Holland, and besides, they had not the social importance of the persons who now proposed to go. John Winthrop himself was born of a good family, and had been carefully educated. He saw the light first just after Mary, Queen of Scots, had been executed and just before the Spanish Armada was dispersed. These two events bring to our mind something of the state of affairs in those days. When but a young man, he was a justice of the peace, and at later period he held other public offices; but he gave them up, perhaps because he did not sympathize with the ruling powers in those troublous times. After the meeting at Cambridge, he occupied himself almost exclusively with preparations for the voyage. The character of the emigrants, as well as the condition of affairs called much attention to the movement, and England was stirred from one end to the other with discussions of it.

Finally, all was ready, and eleven ships sailed, carrying some seven hundred persons. Long and dreary was the voyage, and it was sixty days before the shores of Mount Desert were seen. It took them almost as long to cross the ocean as it had taken Columbus, one hundred and forty-eight years before. Two days after they had sighted Mount Desert, they anchored off Salem, where some of the previous emigrants had established themselves, but the place did not please Winthrop, and he sailed on, entering Boston Harbor the next week. Then he decided to bring his companions to Charlestown.

It is not my intention to tell you all about Governor Winthrop, for I must return to Mr. Blaxton. He probably saw the ships sail into the harbor that he thought would not soon be invaded by Englishmen, and perhaps he was dismayed to think that his seclusion was to be broken in upon. However, he seems to have been a good Christian, and he did not bear any ill-will towards the newcomers. How could he object to their coming to the New World that he had taken the liberty of entering himself?

We are at liberty to suppose that Mr. Blaxton took an early opportunity of calling upon Governor Winthrop, and that he asked him to come over to see him in return. It was not long before his charity was shown more emphatically, for severe sickness broke out among the people of Charlestown, which was attributed to poor water. Mr. Blaxton then invited them to come over to Shawmut, where he had good springs and well-drained lands. It was not long before the company of Winthrop laid claim to the territory on which Mr. Blaxton was living, because it was included in the grant from the King. The right of the King was based on the fact that the early discoverers were Englishmen, though they had not settled the

place. Mr. Blaxton replied to these claims in the old-fashioned language of his time: "The King asserteth sovereignty over this New England, because John and Sebastian Cabot sailed along the coast, without even landing at any place; and if the quality of sovereignty can subsist upon the substratum of mere inspection, surely the quality of property can subsist upon that of actual occupancy, which is the foundation of my claim."

The justice of Mr. Blaxton's claim was so far acknowledged that he was confirmed in his title to fifty acres about his house, which stood not far from the east side of the Common and Public Garden. The feeling of good-fellowship did not grow, however, between the newcomers and the original settler at Shawmut, and the next year, 1634, he was bought off, each householder paying him the sum of six shillings. For this he gave up about one fourteenth part of the peninsula, and saying, "I came from England because I did not like the Lord-Bishops, but I cannot join with you, because I will not be under the Lord-Brethren," he a second time turned his face away from the habitations of men.

When Mr. Blaxton determined to leave Shawmut, it must have been a grave question whither he should go. On what principle he decided it, I cannot say, but this I know, that he went towards Rhode Island, which was soon to become the home of Roger Williams, the refugee from the power of laws that interfered with his freedom of religious practice. "It was the spring-time of the year," when, investing twelve pounds of the money given him for his farm, in cattle, and gathering together those treasured books which had given him so much comfort in the wilderness, he started through the fragrant woods, meditating, probably, like another Valentine:

How use doth breed a habit in a man.
This shadowy desert, unfrequented woods,
I better brook than flourishing peopled towns:
Here can I sit alone, unseen of any,
And to the nightingale's complaining notes
Tune my distresses and record my woes.

Following the Indian paths to the southwest, he found himself on the banks of a river which presented a pleasant site for his future home, and there he built a cottage, calling it "Study Hall." It stood at the foot of a hill, which rose behind the house by three natural terraces. On the second of these he dug a well, and the third formed a place for retirement and study. At the north of the house he planted a garden and at the south he began an orchard, for he raised the first apples in Rhode Island, as, indeed, he was the first settler of the State. The river that flowed before his door has ever since borne his name, though it is spelled Blackstone.

Even a recluse can grow lonely, it seems, for we

find that in 1659, Mr. Blaxton went to Boston and was married by Governor Endicott to a lady in whose eyes he had found favor. They lived together for fourteen years, when the lady died. Mr. Blaxton followed her two years later. During his life in Rhode Island, he had been accustomed to preach as occasion offered, and it is said that in the absence of a horse, he had trained one of his bulls—a white one, some tell us—so that it would serve instead, and that in this guise the strange recluse was wont to make his appearance in the new town of Providence, carrying a home-



DISTRIBUTING THE "YELLOW SWEETINGS."

made bag containing apples—which he distributed among the young people whom he wished to encourage to listen to his sermon that was to follow. They were, it is said, the "yellow sweetings," considered by some the most delicious of their kind.

It would be pleasant to follow the old hermit through his day, to see him looking after his cows and cultivating his orchard and training his flowers.

We should go with him to the woods or watch the Indians come to him, as he bartered his fruits and flowers for furs and such other articles as he wanted. We should like to climb with him the

terrace that led to his place of study, and sit with him as he pored over the great folios that he so much prized.

Alas, history gives none of the details that will enable us to do this, and we must content ourselves with imagining these details of his daily life. His seems to have been in the main happy and tranquil. He was in advance of his age in his admiration of toleration, and he suffered exile for it, but his resources appear to have been sufficient to give him a recompense for his sufferings.

I can readily imagine the Hermit saying with the old Duke :

Hath not old custom made this life more sweet
Than that of painted pomp? Are not these woods
More free from peril than the envious court?
Here feel we but the penalty of Adam,
The season's difference, as the icy fang
And churlish chiding of the winter's wind,
Which, when it bites and blows upon my body
Even till I shrink with cold, I smile and say,
"This is no flattery; these are counsellors
That feelingly persuade me what I am."
Sweet are the uses of adversity,
Which, like a toad, ugly and venomous,
Wears yet a precious jewel in its head;
And this our life exempt from public haunt,
Finds tongues in trees, books in the running brooks,
Sermons in stones, and good in everything.

IN CASE OF ACCIDENT.

BY DR. D. A. SARGENT.

VI.

THE DRESSING OF WOUNDS.

THE dressing of wounds should as a general thing be left to the care of a physician.

It frequently happens however that a wound does not readily heal under the first treatment, the surrounding tissues becoming dry and hard, swollen and inflamed, so that the tension and pressure produced upon the sensitive parts, often occasion much pain.

To ease this suffering something should be done to soften and relax the tissues and relieve the tension due to the inflammation. Nothing is better for this purpose than a well-made and properly applied poultice. A poultice carelessly made or incautiously applied, does more harm than good. As home nurses are often called upon to make use of these aids to nature, it is well that they should receive some hints with regard to them.

MAKING POULTICES.

The best material for poultices is in common use, such as flaxseed, bread, charcoal, yeast, etc.

A cloth that is two inches larger all around than the space to be covered, should first be laid on a heated platter or plate; this will prevent the cooling of the poultice, heat being one of the desired considerations. Upon this cloth place the material selected for the poultice, spread it on evenly, from one quarter to one inch in thickness, according to the requirements of the case.

Now fold the edges of the cloth on to the poultice so as to confine it. Over the top of this it is

often advisable to place a piece of thin muslin or linen, so that the poultice will not come in contact with the skin. This is deemed necessary when the material used for the poultice would be likely to irritate the wound. But as a general rule, it is better to apply the poultice to the bare surface of the wound. The intervention of the linen tends to deprive the poultice of much of its power.

Where it might do harm by adhering to the inflamed parts, a little olive oil should be spread over the surface of the poultice before it is applied.

When the wound is on the face or any other part where it is thought best to limit the special action of the poultice to a small space, cut a hole in the linen covering, merely large enough to allow the poultice to touch the affected part.

APPLYING POULTICES.

A poultice should be applied to the inflamed part as warm as it can be comfortably borne. If the surface be very tender, however, care should be taken to reduce the temperature of the poultice and to apply it gently, one part at a time. After the poultice is applied, the heat and moisture should be maintained as long as possible. To secure this desirable end, a piece of oiled silk or oiled calico should be put over the poultice and the whole held in place by a light bandage. As soon as the poultice has lost its heat, it should be carefully removed, and another one applied.

Frequent poulticing after this manner for a few hours, is much more serviceable than prolonged poulticing.

If the person can not be frequently attended to, the poultice should be made thicker than usual,

and greater precautions taken to retain the heat.

A FLAXSEED POULTICE

Is strongly recommended where a soothing influence is desired and heat and moisture are the great requirements. It is made by sprinkling flaxseed meal in small quantities into a basin or bowl of boiling water. In order that it may not be lumpy it should be constantly stirred until of the right consistency; that is, just thick enough to hold together without running. The quantity of water used should of course be regulated by the size of the poultice desired.

A bread poultice is used for very much the same purpose as the flaxseed, and is perhaps more easily made, though not quite so effective. Take a basin of boiling water, and into this sprinkle dry, coarse bread crumbs. Stir them constantly for a few moments, then cover the basin with a plate or saucer and let it stand in a warm place for five minutes or so. It will then be ready for use.

A BREAD AND MILK POULTICE

Is made in much the same way. Crumble a slice or two of stale bread into a basin of milk. Place the basin over a fire and let the milk get thoroughly heated, stirring the bread crumbs all the time until they are entirely broken up, drain off the superfluous milk or water and spread the poultice on the cloth prepared for it. To save trouble in making this poultice and the preceding one, the bread should be taken from the centre of the loaf so that it will all be of the same consistency.

Yeast poultices are often used where the parts are slow to heal, and it seems desirable to stimulate them.

To make a yeast poultice, take a pound of lin-

seed meal, or oatmeal will do as well, and mix it thoroughly with half a pint of yeast or beer grounds. Put this mixture in a basin and place it over a gentle fire. Stir continually until it is thoroughly heated and of the right thickness, when it can be applied as before.

CHARCOAL POULTICES

Are thought by some physicians to have a disinfecting power and are sometimes used on old wounds and indolent ulcers. They are made by mixing bread, linseed and powdered charcoal in water, and heating them slowly as in the other poultices.

Or they can be made quicker and as well by breaking up the bread and mixing it with the linseed in boiling water, adding the charcoal in about half the quantity just before using it.

MEDICATED LOTIONS

Such as tincture of opium, hemlock, belladonna, etc., are often introduced in poultices when the case demands such treatment, but the home nurse should not attempt to apply these powerful agents without the advice of a physician.

WARM WATER DRESSING.

It may happen that the exact articles needed for a poultice are not at hand, or that those at hand are of too irritating or stimulating a nature.

Under these circumstances warm water dressings are often very acceptable. Fold a piece of lint four or five times. Dip it into warm water, wring it out and apply it to the wounded or inflamed part. Cover this with a layer of oiled silk in order to retain the heat. To make these dressings effective they should be renewed as often as four or five times in twenty-four hours.

LITTLE BIOGRAPHIES.—HOW SUCCESS IS WON.

BY SARAH K. BOLTON.

VI.

JOHNS HOPKINS.

WE are living in an age of remarkable wealth, and remarkable business successes, and of equally remarkable gift-giving and benefactions. Mr. Otis of Connecticut gives a million dollars to carry the gospel to the heathen; Mr. Slater, of the same State, a million to educate the colored people

at the South; Mr. Durant a million to Wellesley College for the education of young women; Leonard Case, of Cleveland, Ohio, a million and a half to a School of Science; Mr. Rich two millions to Boston University, where young women share equally with young men the benefits of higher education.

But Johns Hopkins gave more than all these princely men to found in Baltimore the University and Hospital which bears his name. When asked

for money during his life he generally refused; doubtless his reply often seemed somewhat enigmatical: "My money is not mine. I did not make it. It has merely rolled up in my hands, *and I know what for*. I must keep to my own work."

And who was this munificent giver?

He was a farmer's boy; later, a clerk in a grocery; still later, the owner of a little shop; by and by, a bank-president; at last, a money king.

Johns Hopkins, so named from the family name of his ancestor, Margaret Johns—Johns being an early form of the word Jones—was born May 19, 1795, and was the eldest of eleven children. His father, Samuel, was a Quaker farmer, kind and conscientious, but rich only in his large family. His mother was a superior woman, both in intellect and will; so notably superior, in fact, that it is said she guided not only the Yearly Meetings of the Friends, but many matters of the county as well. Such a mother would naturally impress her strength of character upon her sons. There were too, probably, fine forces latent in the father's blood; Governor Edward Hopkins of Connecticut and Bishop Ezekiel Hopkins of Londonderry, men of mark, were among his relatives.

Little Johns worked on the farm in summer and received whatever education was possible in winter. He was an active boy, both in body and mind, getting and reading every book in the county within his reach. He enjoyed Shakespeare, he enjoyed history, and especially did he enjoy biography; it probably stimulated him, even in boyhood, to find that men had begun at the foot of the ladder and climbed, rung by rung, to the top.

When he was seventeen, a wealthy uncle, Gerard Hopkins, came to pay his parents a visit. He was at once interested in the intelligent boy, and he persuaded the mother to permit Johns to go back with him to Baltimore, and there to learn the wholesale grocery business. Doubtless the boy's heart at once stirred with ambition, perhaps thrilled with pleasure at the thought of life in the fine city. This Baltimore uncle was an eminent minister among the Friends, and his company was much sought after, so that the country lad had opportunities to meet intellectual and well-bred people. The aunt was a most cheerful woman, and very kind to the young new-comer. If he were awkward, she did not appear to see it, but always contrived that he should feel at ease.

For two years Johns worked steadily; the victory of success is half won when one gains the habit of work. The uncle, about this time, was appointed by the Baltimore Friends to go far out to the State of Ohio, to attend the Yearly Meeting. Who should be left in charge of the store, the business, and the family? Mr. Hopkins called his nephew Johns to him. He spoke to him gravely:

"I am going on this long journey, and thee is but

a youth. *Now, I want thee to put an old head on young shoulders*; and as thee has been faithful to my interests since thee has been with me, I am going to leave everything in thy hands. Here are checks which I have signed my name to; there are upwards of five hundred of them. Thee will deposit the money as it is received, and as thee wants money thee will fill up the checks which I leave with thee. Buy the goods and do the best thee can. Be attentive at the house, and see after our little children, whom we leave behind in thy care and a female relative."

A company of five, including his aunt, started on this long journey. There were no railroads. There was often no pathway save the trail of the Indians. They traveled on horseback, fording deep rivers, and threading their way through dense forests. Well, the lad Johns did his part nobly during their absence. It was a time of great excitement, disturbance and anxiety, for the country was engaged in the War of 1812 with England. The British had entered Washington, burnt the Capitol, and were marching up the Chesapeake. The people of Baltimore were fleeing in every direction. Johns might well have been nearly frantic, not daring to leave the children, and yet obliged to care constantly for the store. Finally, three days before the bombardment of Fort Henry, the uncle and aunt arrived home much to his surprise and relief. It proved that he had done better than the uncle supposed he could. He had, during the absence, evidently mastered the detail of trade, had visibly increased the business, and presently it appeared that he had won many friends.

Five years after this his uncle again called him aside. This time he said, "Johns, would thee like to go into business for thyself?"

"Yes; but, uncle, I have no capital. I have saved only eight hundred dollars." (He had been willing to work hard for seven years to save this eight hundred dollars.)

"But that will make no difference. I will endorse for thee, and this will give thee credit, and in a short time thee will make a capital; thee has been faithful to my interests, and I will start thee in business."

"I will endorse for thee." That was a profound compliment, a tribute most uncommon for so young a man to win from an old, clear-headed business man. Johns's habits were well known to his uncle; it was of course taken into consideration that he never wasted his evenings, that he did not spend his money carelessly or foolishly, that he did not make unwise bargains, that, as a rule, he showed good common sense in his dealings.

Starting for himself, he rented a small store, formed a partnership with another young man, and began business unostentatiously. He soon found that better than his uncle's endorsement was the

credit in the community which he had gained through his devotion to his uncle's business.

For twenty-five years, a quarter of a century, Johns Hopkins labored untiringly, late and early. His business grew and extended into other States. He was invariably temperate, and his word was as good as his bond. While other firms failed in seasons of financial depression, his house always maintained the highest credit. While other men drove fast horses, gave entertainments, attended parties, he devoted his time to his business and to reading. There is probably a connection between these two series of facts. Bishop Jeremy Taylor said, "Men will find it impossible to do anything greatly good, unless they cut off all superfluous company and visits."

Mr. Hopkins may have been called unsocial; he never was called ungrateful. He never forgot his uncle. He said when nearly eighty years old, to his cousin, Gerard Hopkins, now living in Baltimore, "If not for him, I would in all probability have remained a boy on the farm."

And now came the time when he retired from the grocery firm, leaving it to his two brothers, who also had come to Baltimore, and two of his clerks. Did he sit down to luxuriously enjoy his wealth? Did he spend it in travel, or in fine social pleasure? Oh, no; accustomed to systematize monetary affairs, he was at once chosen and elected president of the Merchant's Bank, and he accepted the position and held it until his death. Here he had many opportunities to do favors for young business men. These he gladly aided, provided they had shown the three sterling qualities: diligence, good sense, and integrity. In times of panic, when notes were brought before the directors of the bank for consideration, Mr. Hopkins, unsolicited, would often endorse them, thus helping worthy but unfortunate business men when they most needed it. But for lazy people, or for those who seemed to have no aptitude or tact in making a place for themselves in the world, he had very little sympathy.

Mrs. Caroline H. Dall tells of a Baltimore firm, that, having hung his picture in their office after his death, were thus interrogated: "What was Johns Hopkins to you?"

The reply was this: "We began with very little. We were his tenants; the rent was heavy; he exacted it to the moment, and we lost many an opportunity because we dared not risk a dollar after it became his due. One day he came in himself to look after it. 'Why don't you do a larger business?' said he. 'You are prompt; you ought to get on.' We told him candidly, and he wrote us a check for ten thousand dollars on the spot, and told us not to hurry about paying it! When we were able to repay him, he returned the interest. From that day we prospered."

They had never regretted the hard way in which

they earned his respect, and they warmly cherished his name and memory.

His giving was usually along this line of industry and energy and promptness. He delighted to reward and recognize these qualities. For instance, five persons gave each a hundred dollars to buy goods for a poor widow. At the end of two years she returned the sum with interest. Mr. Hopkins refused his share. He said, "I don't want it. Keep it, and lend again in the same way."

He was interested in all commercial enterprises, especially those which concerned his native State. Once when the Baltimore and Ohio Railroad came near to failure, he boldly pledged his great fortune in its behalf, and thus inspired confidence to such a degree that men of wealth immediately invested in it and saved its future. He was made a director of the road, then chairman of the finance Committee, and in 1873 furnished the company with nine hundred thousand dollars, which enabled it to pay its interest in cash. He was now the possessor of two hundred millions worth of stock, owned one hundred and fifty warehouses, was director in five banks, treasurer of a large insurance Company, and large stockholder in various coal and other companies. But it was by the same pluck and same patience which enabled him to save up eight hundred dollars dollar by dollar through seven long, slow years of drudging detail work, that he gained and managed and kept and increased his millions.

"What will this rich man do with his money, as he is unmarried?" the people of Baltimore began, by and by, to ask about the white-haired old millionaire. He had given three thousand dollars to help build a Quaker meeting-house, but this was little to the public, thought the world, for a man worth his millions. "Make your will," said his friends.

"I am not ready," was the enigmatical reply. "I have got something to do, and I shall live till I have done it."

Absorbed in business, he still felt the early training of that mother with a gift for administration whose constant thought was how to wisely help the world. "Such a remembrance," says Lamartine, "is a North Star to any wanderer." Randolph said, "I should have been an atheist, if it had not been for one recollection, and that was the memory of the time when my departed mother used to take my little hand in hers, and cause me on my knees to say, *Our Father which art in Heaven.*" Certain it is that Johns Hopkins, as the years went on, felt more and more the actuating power of his mother's spirit. He pondered well the disposition of his vast property. He determined to place it where it would do constant good; where it would carry on his favorite work of aid to those who were working their way up as he had done! Not by money itself; they must earn that for

themselves — it was necessary to the development of mental and moral muscle. But he would give them knowledge, which Daniel Webster said, at the laying of the corner stone of Bunker Hill Monument, "is the great sun in the firmament; life and power are scattered with all its beams." His old heart went out, too, toward the sick, and toward orphan children, because these could not earn for themselves.

Therefore it was, that at his death, December 24th, 1873, when his will was read, it was found that he had left *seven million dollars* to found Johns Hopkins University and Hospital. It was a grand Christmas gift to a city, to the world at large.



JOHNS HOPKINS.

Broad and wise in his giving, he made no conditions, save that the principal should not be used for buildings; these were to be erected out of the income; and there was a request that there be several free scholarships for poor students from three States — Maryland, Virginia and North Carolina; and in the Hospital, which should be built only after careful investigations of similar institutions abroad, there should be a training-school for nurses; and on another piece of land, he provided for an asylum for four hundred destitute or orphan colored children. Plans of the Hospital, which will be one of the working schools of the great

University, are hung in the halls of Oxford and Cambridge, for the whole world is looking to see what the seven million dollars of the grocery boy will accomplish.

And what have they already accomplished? The trustees, whom Mr. Hopkins had selected and appointed, looked about the country for a president, and the choice fell upon the youthful leader of the University of California, who had married the daughter of President Woolsey of Yale College. When Doctor Gilman came to Baltimore, Johns Hopkins's sister said to him, "I had thought of an older man." He replied with a smile, "It is a fault which will mend daily. I assure you, madam, I will be as old as ever I can."

A letter recently received from one of the professors in the University says: "Johns Hopkins's knowledge of men was superb. He knew by a kind of instinct whom he could trust. But the wisest choice he ever made was the choice of his Board of Trustees, and the Board has shown its sovereign sense in the choice of President Gilman."

The best professors possible have been secured: Professor Sylvester, to whom the Royal Society of London gave its highest scientific distinction, the Copley Medal, for the chair of mathematics; Professor Martin of Cambridge University, Biology; Doctor Haupt of Göttingen, only thirty years of age, for Hebrew, Arabic, Assyrian, Ethiopic and other languages — in short, there now are forty-one able scholars on the academic staff. Students, most of them already graduated from other colleges, soon began to gather here for higher education in special lines of work. Of five hundred who have studied at Johns Hopkins University, only forty have gone into business; a large proportion have become professors and instructors. Perhaps Johns Hopkins planned even better than he knew, when he threw his great pebble into the ocean of knowledge; the circles will go on widening.

The spirit of its founder certainly pervaded the institution. Six valuable journals are maintained by the University; in Mathematics, Chemistry, Philology, Biology, Historical and Political Science, and Logic. Much has been done in original research. Says a recent writer, "An idler is an *unknown* bird at the Johns Hopkins University. Its members are here, not for boating, base-ball playing, and hazing, but for work." The atmosphere is scholarly. For several years there has not been reason for any officer to censure a student for disorder or discourtesy.

Each year twenty Fellowships of five hundred dollars each are given to as many scholars of marked ability who are fitting themselves for a life-work of study. Among these recipients are Mitsura Kuhara and Kakichi Mitsukuri of the University of Tokio, Japan. Another is from the University

of France. Eighteen Honorary Hopkins's scholarships are distributed among those under-graduates who show great merit. The present college buildings are plain, but fine ones are to be permanently built at Clifton, a Baltimore suburb, with grounds several hundred acres in extent. This estate was Mr. Hopkins's country seat, where he walked and thought and saved and planned for his grand beneficence. He might have reared a magnificent granite shaft to himself; he might

have lived in costly ease, but he has preferred a monument which will proclaim his name throughout the world. To be simply rich, is to be forgotten like thousands of other millionnaires; to give wealth like Johns Hopkins is to be remembered with honor and with gratitude forever. Generations of boys will grow to be men, and their children's children will come into this busy world and go out, but the work of this "seven millions" will never be finished.

WAYS TO DO THINGS.

BY MARGARET LAKE.

XX.

SIR WALTER SCOTT'S IDEA: AND SOME OTHER IDEAS.

SOME years ago, while reading Lockhart's *Life of Sir Walter Scott*, I came across a passage, in the autobiographical part, which struck me as so suggestive that I copied it; and here I copy it again, after which I will say my little say on the subject (it was when he was a youth, you know):

Wherever I went, I cut a piece of a branch from a tree — these constituted what I called my log-book; and I intended to have a set of chessmen out of them, each having reference to the place where it was cut — as the kings from Falkland and Holy Rood; the queens from Queen Mary's yew-tree at Crookston; the bishops from abbeys or Episcopal palaces; the knights from baronial residences; the rooks from royal fortresses; and the pawns generally from places worthy of historical note.

Do you suppose he ever did it?

Now I had had the "collecting craze" for years, just as most boys and girls have now; and wherever I had been, had secured something, till a most miscellaneous accumulation was packed away in boxes and drawers about the house. Moreover, the rest of the children, as they grew up, had been possessed with the same idea. The boy who went South had obtained specimens of different kinds of woods; the one who was in the army had picked up relics; the girl who went to the White Mountains, and afterwards to Ticonderoga, had gathered mosses, leaves, and wild flowers.

Besides, all of us who had a duplicate or a bit to spare, had exchanged with some of our friends, just as you are all doing. The thing is in the air. Boys are boys, and girls are girls, everywhere; and fashions repeat themselves, and are passed on. You are doing what we did before you; and by and by, others will do as you are doing.

The result was that we had a little of everything, and a great deal, a very great deal all told; and when spring house-cleaning came around, and as in all proper households, every closet and drawer, bag and bundle was turned inside out, our mother would say: "Why don't you make something out of these things? Seems to me if I couldn't, I'd give them to somebody who would."

There was the trouble — we meant to; forever meaning to do something; but that class, whether old or young, does not usually accomplish much.

But let me tell you of things that *have* been done — by whom it does not matter. One boy started up on Sir Walter's plan, and set the example for his comrades (besides correspondents); so that presently hand-books on chess made their appearance in the neighborhood; and there began to be a great deal of turning on lathes, and fine sawing, and whittling, and sand-papering. Pretty soon chess was all the talk; and as that game is one which requires in Wordsworth's line (written on an altogether different subject)

Endurance, foresight, strength, and skill,

(the strength being strength of purpose) also a good head for planning, and a memory, it turned out that the chessmen fancy proved a good thing. Nothing outside of good, hard, school studies can better discipline some of the faculties than that game. It is indeed no light accomplishment to play even tolerably well. Besides, when those boys were absorbed in chess, their fathers and mothers did not have to worry about them when they were away in the evening.

One set had historic associations almost the next best thing to Sir Walter's. Think of the king being made of a piece of wood from Mount Vernon; a castle (or rook) of a piece from Fort Ticonderoga (we have forts, or ruins of forts, enough); a

knight from a piece of John Brown's scaffold; and the pawns from a peach-tree that grew from a stone a soldier had thrown away on a Virginia battle-field.

Chessmen can be made from specimens of wood of our native trees; solid oak for king or castle, delicate poplar or birch for the queen, and so on; or of any curious and rare woods; and almost all have some beauty of grain or markings. They can be turned on a lathe, and then finished in grooves and otherwise, or wholly done with the knife. Many, as you know, are in two pieces; and the king and queen in some sets can be taken apart in two places, making three.

There are great opportunities in pieces of wood. The boy who went to the war brought home enough of Southern woods for several canes; and for convenience in packing, he cut it in sections about six inches long; purposing to fit them together on the same principle that a cap of rubber is fitted to the end of a pencil; by cutting away on one piece to slip into a hole made in the next, plug fashion, and there glued.

Relics in wood can be worked into a glove box or handkerchief box, skilfully joining the parts and as skilfully gluing them. Picture frames suggest another form. There is one here made by a clerk in a store while waiting for customers. It has over three hundred small strips, lapping in a fanciful way, and not a tack, or a brad is used in the work; but this is too complicated.

It is easier to turn out checker-men or napkin-rings, or make pen-holders, or paper-knives. Very elegant paper-knives can be fashioned, having one kind for the blade and two for the handle. But all this woodwork must be done with great care, accuracy and nicety, not only in the cutting and dovetailing or matching of the parts, but in the gluing and finishing off, including a delicate oiling to bring out the grain. It is nice work; to be sure it is. But if soldiers in prisons can do such things as some of our soldiers did, with not much besides a jack-knife to do with, pray cannot a smart Western or Eastern boy do as much?—between scroll saws and the variety of choice tools within his reach, he is not the boy I take him for if he cannot make himself a set of chessmen, or a work-box for his sister.

As for minerals, I lately saw at a State Fair a box on which broken-up specimens from that State

were glued, crusting it all over with stone that sparkled in places like crystal. On each specimen was a mere speck of paper with a number on it, which corresponded to a number on a written list placed inside, telling what they were—beryl, tourmaline, quartz, etc., etc., and I thought it an admirable thing.

In a parlor, arranged in a border around the little iron fence in front of the coal grate I once saw a curious display of cobble-stones brought home from different beaches. The lady who put them there was artistic, and the effect was pretty. Sea-shells of delicate varieties can be used as necklaces or bracelets if pierced with a red-hot darning needle, or in some way bored to admit of being strung; some of those lovely, iridescent, foreign shells, strung in such a way, are greatly to be desired. You can think of so many ways to put them to pretty use!

Mosses and lichens you can group on card-board or glue them to a wooden cross. With leaves and pressed flowers you can do no end of things. You can mount them on card-board, or make a wreath of them around a piece of wire or rattan; or ornament a fan with them—a round, Japanese fan, re-covering it with silk or paper of a neutral color, for background. One girl made a transparency with three or four bright autumn leaves (from a wood-bine), which were gathered from among some that had fallen at Longfellow's gate—just where the poet's feet had passed in and out hundreds of times. She cut two pieces of coarse lace to fit the window-pane, glued her cluster of leaves in the centre between them, then overcast the outer edges and put on a deep binding of crimson velvet. As the light streamed through they were gorgeous as old stained glass.

If you collect relics, souvenirs, mementos, curiosities, they are worth arranging. If you get tired of them, give them to somebody else.

All these articles require much painstaking. They will be spoiled for any person of good taste if they are daubed, out of proportion, or awry. Don't let them have a home-made look either. They need not. No reason why a boy of average skill should not do as well, after some experience, as those sailors in the light-ships; or why a girl should not, with care and all her trying, make as pretty things as the gypsy women or the nuns, of whom people like so well to buy.

ANNA MARIA'S HOUSEKEEPING.

BY THE NEXT NEIGHBOR.

XVIII.

SHOPPING.

THERE is art in spending money, and you will find that knowing how to use it to advantage is the best help to a generous disposition. As Mrs. Carlyle in her shrewd Scotch way would observe, "There's a deal of spending in a dollar," if you know how to make the most out of it. "To make the crown a pound," or to make it go as far as a pound, is the lesson most of us have to learn nowadays, when the world is so full of wants that even the rich rarely have as much ready money as they need at their command. After all it is the contriving and making the most of every coin and scrap and handicraft that gives zest and flavor to our possessions, and to life.

The first thing in clever shopping is to know what you really want, and let me tell you many people never get so far in their lives as to know this. Take an evening to it—make a list of all you would like to get if you had the money. Consider what substitutes you can contrive without spending, then strike out everything you *can* do without from the rest, and see how far you can indulge in the way of pleasant things which are not strictly necessities. Then write another list of things you need, and ought to have. It clears ones ideas and is a great help to thinking to write out these lists with the prices. Then you see just how far your money will go.

Don't rush out and buy at the first shop you come to, after the fashion of foolish damsels. A good buyer never spends money till she has been the round of the shops learning prices. You have heard deserved ridicule of idle women who spent their own time and the seller's, pulling over goods for amusement, on the plea that they were "pricing" things. But it is quite the usage and wholly allowable, to make the tour of shops to inform yourself on styles and prices. Take the early morning, or a rainy day when few customers are out, and the clerks have time to attend to you. Say politely that you do not mean to buy at once but wish to look at such and such goods, and learn the prices first, and use all the despatch you can, not to take too much of the merchant's time for nothing. Learn to be prompt and decided in your choice, not to sit looking foolish over a counter of goods unable to make up your mind what you want, or be bullied or persuaded into buying what you don't really like. Refuse to let the clerk

pull down things you do not need and cannot afford, on the plea of merely looking at them, for after a certain amount of attention he has a right to expect you to buy of him, and to feel ill-used if you do not. Be careful about giving trouble in these pricing expeditions, and you leave no hard feelings behind if you do not leave a penny in trade, or even buy the traditional paper of pins. Don't ask for samples unless you really need them and intend to buy. The girls and women who tell of the pretty percale and silk pieces they get for patchwork by asking for samples, confess to a petty fraud, unbecoming a lady, for it is neither more nor less than getting goods under false pretences. Be sure that experienced clerks know very well whether you are honestly and thriftily learning prices, intending to buy, or making pastime of looking over their goods, and wasting their time and your own.

Every good shopper knows the best time for buying at low prices is when the height of the season is past, after New Year in winter, or in July and August. All classes of goods are then marked down in price to sell them off before the new goods come in for next season. Now you will find hosiery and underwear from one third to one half cheaper than the same qualities were before holidays, and now is the time to lay in a stock of woollen fabrics, flannels, blankets, towelings and housekeeping goods. Before the spring fashions are out and the rush of dressmaking begins, all hands in the making-up department of large stores are busy on chemises, nightgowns and all sorts and sizes of underwear, and the counters are piled with drifts of white garments, pretty with tucks, ruffles and embroidery at much less than you can get the material and have them made—yes—but not so cheap or neat as you can make them yourself. If the main point in your shopping is to make the most of a little money, and you have time at disposal, do not spend on ready-made clothing. The gown which looks so neat for one dollar, really takes but four yards of eight-cent cotton with five cents' worth of thread and buttons and two yards of cheap embroidery. You can make a better gown easily in half a day with the sewing machine for half the money. Ready-made things are a boon to overworked mothers and busy women who have not time to set a stitch for themselves, but they look with envy on the trim, refined garments which nice sewers make for themselves. You want to make your own ruffling and knit or embroider your own fine durable

trimming if you are bent on ladylike economies.

Buy all thick underwear in the between-season after the January stock-taking. The fine Scotch wool socks which were seventy-five cents in December are marked down to fifty cents now, and there are bargains in good strong hose for girls and boys for a third less than you can get them next fall. It is good judgment where economy is an object to buy all your flannels for next winter before April, from undervests to blankets. Save a little ready money to buy when things are cheap if you want your purse to hold out through the year.

By the way, bonbons and small wares run away with more of girls' money than they would like if they knew it. If one spends only five cents a week in candy, it is two dollars and fifty cents a year, the price of a good book, a pretty ornament, or the materials for a lasting bit of decoration, which the girl who has *only* five cents a week to spare needs much more than she does walnut taffy or lime drops. Five cents a week for candy! More girls spend a dollar a week, and I know plenty of them who never come home from downtown without their pound of "French mixed." Good candy is delightful and the craving for sweets is natural in young folks, but you hardly like to think of all the other things it runs away with in five years. Just look this question squarely in the face, whether you had rather have a sugar almond to nibble any hour of the day, or ten or twelve dollars more to spend at holidays. If you choose the latter, and want to get rid of the taste for sweets, buy a pound or two of the stuff and eat all you want for once. The girls in the confectioners' shops rarely care for candy, and you can soon break yourself of the craving for it all the time. Then if you want it afterward, arrange that it shall fall in with your expenses — a "quarter" of chocolate drops is no bad substitute for a lunch in a day's shopping, or crackers and a box of bonbons for the family will give an inexpensive treat instead of a regular tea, after late dinner, Sundays or holiday evenings. I give this much space to the candy question, because it is one of the serious items in a modern girl's spending, and most families spend more for it than for their garden expenses and plumber's bills, if they only knew it. The readiest way to manage the candy bill is not to allow it as an extra, but make it fill the place of something else, as food or treat.

Then the little things, the spools of silk, the tape, hairpins and nets, the skeins of filoselle and crochet needles that are so trifling when bought, but take the change out of ten dollar bills so easily. The only way to reduce these expenses is to buy the year's needs at a time, and *make the supply last*. Count how many papers of hairpins you used last year, and how many pins and needles. Your account-book will tell if you keep one, and

that's one of the benefits of keeping accounts — you know where you can save if you must. Four papers of hairpins, and three papers of pins, large, medium and small, and three papers of assorted needles are all a girl can actually use in a year though not all she can waste. I hope you are not the girl I heard of at boarding-school who used to pull the pins from a paper and shower on the carpet so that she could always have one by stooping to pick it up wherever she stood. It was convenient, I grant, but the plan has its drawbacks. Yes, I can remember when the idea of taking care of pins and needles was insupportable to me in young lady days, when the word saving was as hateful to me as it is to most girls. But when I go by the pretty things in the holidays, and sigh for a beveled mirror in a plush frame, or a guipure canopy and coverlet, or an embroidered cushion that is beautiful as a painting, and think "You goose, you might have one and all these things for the money wasted in pins and findings in the course of your life" — why, small economies don't look as despicable as they used.

For the material part of her wardrobe, the first thing a girl wants to do when she comes to use her needle cleverly, is to buy a piece or two of good cotton and linen, for a full supply of lingerie — which sounds better than the nondescript word underwear. Let her take a season or a year to the work, which will be a pride and satisfaction to her. The dainty tucks, and buttonhole scallops, and whipped ruffles instead of machine work, will give her belongings a value in every feminine eye which falls on them, and then I who scribble from week to week without stop must pay thirty dollars the dozen for things that don't begin to compare with yours which never cost you ten dollars. And I never take any comfort in these shop-made things either. You may choose for this work either the fine Lonsdale cambric at twelve and a half cents — not shirting by that name — or the heavy India cottons at forty cents a yard if you want fabric that will last for nice embroidery, or the white French percale at twenty-five cents. Or as the thrifty French seamstresses and waiting maids do, you may buy the finest unbleached cotton with roundest even thread, at ten cents, bleach and embroider it for something almost as nice as the higher priced imported cottons. The hand-embroidered gowns you see marked as French and that sell from three to ten dollars each are made of soft Willimantic cotton at seven and eight cents a yard, wrought by fishermen's girls on the Maine shores, or French Canadians in forest homes in the long winters of Prince Edward's or the Saguenay. As for linen, you will be lucky to find the Union linens, for personal or household use, which were common a few years ago, and which being half cotton were pleasanter, healthier and cheaper than the pure flax. Pure

linen is desirable for handkerchiefs, towels, table-linen and shirtmaking, rarely for other purposes. But in these goods there is much to know of the difference between the weight of single and "double damasks," "half-bleached," and "blue Barnesley," and true ecru, between Irish, Scotch and Saxony or Russian linen, which last is stronger and more lustrous than any other from the fine variety of flax grown for it. Pure linen has flat thread, and pulls into ragged fibre, while cotton breaks short.

For dresses you want changes of pretty house gowns, in washing materials, which Americans will soon learn to use as much as the French do. But for this purpose do not choose the pretty satines and painted percales, which are meant to be made up with frippery of linen lace and satin ribbons, worn a season without washing and thrown aside. They will not wash and wear a month to satisfaction. Buy the stout and fine American and English prints in small figures, and check gingham, to be made in their own style, not with puffed and draped overskirts, in imitation of the latest fashion plates, but in simple gowns or frocks, of Kate Greenaway figure if you like, such as the Lady Beatrice and Lady Gwendoline abroad wear at their lessons, and walks and painting till they are "out" in society and wear full toilets. For walking dress a fine flannel suiting is better style than brocaded wools or imitation stamped velvets as you know. Learn one safe rule, never to buy cheap trimming, such as fringes, velvet ribbons or beadwork. Self trimming, of stitching, folds and pleating of the dress material is always good, while cheap lace and finery stamp the wearer as vulgar at once. Linen-back velvet and satin answer as well or better than all silk materials for trimming because they are firmer and do not fray readily. Lift the velvet to the level of your eye against the light to see if the shade is blue black or rusty, or if the pile is thick and even as it should be. As a rule, trimming materials just above the medium price wear longest and give satisfaction. The cheap stuff is of poor quality, the high-priced owes its cost not so much to quality as to some freak of fashion.

For better dress it is safe to buy standard materials and quiet colors, trusting the accompaniments to give it stylish air. Unless one goes out a good deal, a brocaded velvet dress or cloak for instance will be out of date long before it is ready to throw aside when you can wear a plain silk or cloth with trimming of fur one year, front of figured velvet the next, and embroidered bands or bright colored linings another. Do not buy fancy fabrics in cheap quality. They must be very good to wear at all.

In light weight silks, choose the smooth dull tafetta or the twilled, instead of thin, shiny gros grain. For trimming, buy thick, soft silks. But

choosing a silk dress is another matter. As deceitful as silk ought to be a proverb. Probably not one silk dress out of a dozen gives satisfaction to its owner, by wearing as it should. I'm not speaking for girls who have half a dozen new gowns a year, but when you buy a silk dress, Anna Maria, you want something for the investment that will look ladylike among the best, and will not deface or give out under three years' frequent wear. Then don't spend time looking over Bonnet's or Guinet's silk, but patronize your own country's manufacture. Don't you know that American silks are the standard for good qualities? Ask for the first quality of Cheney's American silk and be sure you get it, for the firm sends out two grades, and you want the best, pure silk, weighty but soft, with subdued lustre, that does not rustle overmuch, a silk for a lady's wear, and which is largely bought by English ladies for its excellence. There you have a dress to last from six to ten years according to the wear you give it, without cutting on the seams or wearing shiny. Silk is cheaper this year than for many a long one before it, but the American holds its own, here and abroad. You may not find the best quality outside the large cities — I never have been able to — but when you do, you will know what good silk ought to be.

And that reminds me, to tell you and all girls of the advantage in buying all you can in the large cities. I often think while passing the pretty things in the shops that I, an old lady, have no longer use for, how delightful it would be to send excursions of country girls here twice a year to do their shopping. Why, it would be like dropping a little fortune into their laps, or doubling their spending money. The pretty percales and satines down to a shilling that were fifty cents the last I remember, nice *foulé* cashmeres at half a dollar, Jerseys at two dollars, neat walking jackets that a ladylike girl need not despise as low as five dollars, and handsome long cloaks for fifteen and eighteen dollars — things of really good style, not rubbish. And the pretty laces, aprons, ribbons and kerchiefs for so little I wonder that city people with nieces in the country are not always sending presents for the pleasure of it. Of course you can send for catalogues and buy by mail, but catalogues have to be paid for by the makers and their prices are never anything near as low as you can buy yourself, being as a rule half as much again as the same goods would be sold to you over the counter of the same store. And the women who make a business of "shopping with taste and discretion" make higher charges still. If you want the benefit of shopping by mail, have a correspondent in the city who doesn't make her living by that sort of thing; some girl who knows the shops and where to buy blonde hairpins for five cents a paper, and crimp nets for ten, and

lovely ruffled white muslin aprons for twenty-five, and capital long spring gloves for a quarter, and Swede musquetaires for seventy-five that won't give out while you are pulling them on. You might make the service mutual without either paying too dear for it, by giving her a percentage or by returning the favor to her family in buying their quinces, grapes, honey, and pounds of winter butter at country prices, as city people like to do. In this way city and country can keep up cordial

acquaintance and help. Or you could send her yards of that pretty linen lace you knit at your leisure, or work a toilet set, or do some dainty sewing that town life has no time for. Such friendly little arrangements can put fresh grace and help into many quiet lives, and lengthen strait incomes just as well as if the fabled uncle from California had stepped in with the gift of the equally fabulous check—of which uncles are strangely forgetful nowadays.

DAYS AND NIGHTS IN THE TROPICS.

BY FELIX L. OSWALD.

CHAPTER IX. (*Continued.*)

A PERILOUS ADVENTURE.

OUR road now led steadily uphill till we reached a plateau where the ground was covered with volcanic rocks and a sparse growth of currant bushes, and here we saw for the first time a troop of the singular creatures which the natives call guanacos, or mountain-llamas. They were browsing quietly on the slope of a little knoll, and I had just stopped my mule when a snort of their leader caused them to look up, and there they stood, gazing at us in evident surprise, and now and then looking at each other with a curious toss of their heads, as if they were getting impatient to solve the mystery. In mid-summer guanaco meat is as tough as leather, but, meaning to scare them, I reached cautiously for my pistol, and at the report of the shot the guanacos sprang back with a simultaneous snort, and wheeling around the knoll, started uphill at a gallop that kicked down a shower of sand and flying stones. We lost sight of them on a still higher plateau, where we were surprised to find a luxuriant growth of wild flowers. The berries of the currant bushes were as ripe as in the foothills, and we found some sweet plums, while those in the lower valley were still green and hard.

"This must be a new kind of plums," I remarked. "I have never seen them bear fruit on such high mountains."

"No; I will tell you what it is," said the Captain. "We are only half a mile from the great barranca, and the volcanic fire forces the vegetation like a hotbed."

We followed the banks of a little creek that became deeper and deeper, till we came to a rope-bridge at a place where the creek-bed suddenly

opened into an abyssmal gorge—the great barranca of Belcarras, that connects with the western crater of Mount Cotopaxi. Near the bridge the cleft was hardly twelve feet wide, but as far as our eyes could reach the walls were absolutely perpendicular and as slippery as a river-bank after an inundation. Here and there these walls were seamed with fissures that appeared to form the safety-valves of the subterranean furnace, for every now and then they exploded little clouds of white vapor that curled up and dissolved in the upper air like the smoke of a locomotive. At longer intervals larger clouds shot up with a puffing noise that resembled the snort of an angry horse. These heavy shots, as we called them, came all from the lower depths of the barranca and were sometimes accompanied by a volley of stones that made us spring back in wild alarm, till we found that the hidden battery shot its missiles so straight up that they did not even touch the walls of the gorge, but nearly all fell back into the night of the abyss.

"How deep do you suppose that barranca is?"

"Wait," said he, "I'll show you. Look here, boys," he called out, "can't you find some kind of a big stone?—no, no, a larger one," he laughed, when Benny dug up a handful of pebbles from the creek. "Stop," said he, "this will do," pointing to a large basalt boulder in one of the side ravines; "let's see if we cannot move this fellow."

By dint of hard pushing and pulling, we managed to roll the rock to the edge of the barranca, and then went back and cut down a young plum-tree in order to use it as a lever, for the banks of the gorge were so slippery that we did not like to go too near. Twice our lever broke, but when we applied the stump for the third time, the rock slid down till its lower end tipped over, and amidst the exultant whoops of the boys the ponderous mass toppled overboard.

"Keep still there!" the Captain called out; "now listen."

We squatted down and listened with bated breath, and I had slowly counted till twelve, when we heard a low thud, as if the rock had struck against the edge of a cliff, then a fainter and fainter echo, till the last rumbling seemed to die away in the depths of the nether world.

We camped that night at the bank of the little creek, though all the water we could find was as warm as soup. But after exposing it for a while to the cool night wind it soon became fit to drink, and we had then a splendid picnic of plums and roasted acorns, besides the cakes and dried meat we had brought up from Las Vegas.

I had slept about four hours when I was awakened by a draught of cold wind, as if somebody had opened the tent.

"What's up, Monito?" said I, seeing Benny's little head at the entrance.

"Oh, come here, señor," he whispered. "The sun is rising in such a funny way — the sky in the south is as red as fire."

"In the east, you mean?" I asked.

"Oh, he must be crazy," grumbled the Captain. "I have not slept a wink yet, and I know it cannot be more than midnight."

"No; but come here, gentlemen," called the

guide from the outside; "I do not know what to make of this; it's worth seeing."

We crawled out of the tent and felt disposed to forgive Benny's importunity. Many people would have travelled a hundred miles to see a sight of that sort. Far on the southern horizon hung a streak of black smoke, capped with darting flashes, as if a thundercloud were shooting up a continuous volley of lightnings, accompanied by a rushing noise that could not be mistaken for thunder, and still less for the faint rustling that sometimes attends the first outbreak of a northern light. Now and then a fiercer flame shot up like a rocket and illuminated the cliffs of the highlands with a flickering shine.

"What in the name of wonder do you call that?" asked the Captain. "It can't be the Gran Cerro (the 'great mountain,' as the Peruvians call the Cotopaxi), can it?"

"No; that's just what puzzles me," said the guide. "The Cerro is straight northeast from here, and this seems to be southeast or south. It must be the Volcano of Antisana. If it were not so miserably cold up here," he added, "I should say it's a pity that we did not camp on the upper Sierra; not more than eight miles from here there is a ridge where you can see the Cerro plainly, and all the volcanoes from Peru to New Granada."

(TO BE CONTINUED.)

WHAT TO DO ABOUT IT.

EVA S. L. is very anxious to learn to skate, but her ankles are so weak that they turn when she attempts to strike out, a defect of which others have complained to the department. Bathe the ankles and the lower part of the spine in very warm water till redness appears, then sponge with cold and rub briskly. Rubbing with deer's fat, bathing with strong salt water, and stroking the calf of the leg and the ankles are recommended to make them strong. It takes a good walker to make a good skater, and there is nothing like due exercise to give sound, steely muscles, fit for any sort of work.

A SUBSCRIBER. Purple ink is made by dissolving a few grains of aniline violet in boiling water till the right depth of color is secured. For the blue ink which turns to black, dissolve the iron salt mentioned in the sulphate of indigo, grain by grain, with the purest soft water, filtered or distilled if you can get it, till the ink is right for use. Let it stand three days before you decide on its quality. It goes hard to say no to the requests of

correspondents, but I cannot send receipts and answers by mail.

JESSIE JESSEL has read and taken the advice to prevent colds by exposing the body to the air, and not making the skin tender by dressing in warm clothing. Of course it gave her a worse cold than ever. If she learns not to believe everything she reads, the wisdom may be well earned at the price of a heavy cold. However, this trying experiments on one's health is too dangerous for young people, who easily do themselves a mischief from which their systems never recover. What are our feelings given us for, if not for guides as to what is safe and desirable, or not? The effect of cold is to depress vitality and, though the reaction may leave one warmer and stronger than before, yet it is at the cost of vital force which many constitutions cannot afford to lose. The exposure which may be pleasant to a strong man or warm-blooded youth will ruin the health of a girl or a slender boy. The best way to cure and avoid colds is to keep warm, and never to suffer a chill on the sur-

face of the body. It is not the warmth of the air we live in which causes colds, but its impurity and lack of moisture.

JOHNNIE and others demand as usual a skate-bag model, and I am happy to give the directions for an excellent one, made for a Boston boy's holiday present. It is of bronze-green flannel, fourteen inches by thirty-two, lined two thirds of its length with chamois leather, and strongly stitched and bound to form a pocket twelve inches deep, with flap ten inches, lined with gray twilled linen, buttoning squarely over the front with five round gilt buttons, below which on the edge are five gilt miniature sleigh bells jingling as the owner hies along. A leather strap like that of a courier's bag goes over one shoulder, and a large spray of golden rod embroidered on the flap completes what you will allow is a dashing style of skate-bag.

GOOSEY wants a few questions for a girl's debating club. Will these meet your views? I'm afraid not.

1. In case where politeness or sincerity must suffer, which is best secured?

2. Is Helen, the heroine of "A Woman's Reason," a model for imitation? If not, why not?

3. What occupations are desirable for girls?

4. Find the women in fiction whom it would be really desirable to know personally, and give the reasons for liking them.

6. What would you do toward caring for yourself, if suddenly left an orphan and without money?

7. How far can girls carry gardening, fowl-raising, bee-keeping and other out-door pursuits? Give all the examples of enterprise in such pursuits as you know.

L. U. C. 1. "Who invented the multiplication table?" We cannot say any one invented the fixed facts of numbers, any more than he invented the length of the days. The Arabs, however, who were the first among learned nations of the world, and who taught the first treatises on numbers, probably arranged the tables of arithmetic as we use them.

2. Say "Everybody went but me;" but in this sentence being a preposition.

S. M. A. "I saw some elephants bathing the other day, and when they finished, they threw sand all over themselves. Will you tell me why they did so?" This is left an open question for the readers of WIDE AWAKE. How many different reasons can be suggested why the elephants threw sand in such an undignified manner. This question will serve as well as any to exercise the thinking powers of our readers—reminding them that to think clearly and to some purpose, on any given subject, it is necessary to know all that can be gained on the topic by reading or conversation. Let each reader who feels curious on the point, ask at least six persons the question above seriously, and write the answers.

A. R. and B. B. "Please tell two girls how to put up simple gymnastic apparatus in a barn?"

The best gymnastic aid known is the pair of handles fixed to a stout rubber rope fastened to the wall, by which one can swing, twist from head to heel, hand over hand, and gain the most perfect suppleness of every limb without danger of strains or falls. But the price of this gymnastic pull is five dollars, and something at less cost will be acceptable to most persons. A new inch rope fastened to a high cross-beam with handle of turned hard wood attached by the middle to the lower end of the rope, swinging the height of one's head, will afford scope for a variety of exercises. A stout new clothes line ten feet long, fastened by the middle to a hook in the wall, with skipping-rope handles at each end, allows of many twisting exercises which tend to suppleness of joints. A rope thrown over a beam with a weight at one end and handles at the other to pull by, gives many a good tug to strengthen the muscles. A strong oak bar fixed across a door-frame, one foot higher than you can reach standing, will answer for the feat young gymnasts are anxious to perform, of hanging their whole weight by their hands. Slots for bars may be fixed at different distances opposite each other in the sides of the door-frame, or holes may be bored for bars which answer for ladder feats, or swinging at arm's length. All ropes must be sound and strong, all handles of hard wood, round and smooth to the grasp, and not too large for the hands which are to use it, to prevent dangerous accidents.

HAN. "What will remove scars caused by small boils? I have tried internal and external remedies without effect." Try (1) a square of flesh-colored court-plaster an inch larger than the scar, worn for weeks, applying a new one as fast as the first piece comes off; (2) a paste of bean-flower and white of egg, left to dry on over night, continued indefinitely; (3) is an old recipe which melts one tablespoonful of the finest turpentine (not spirits of turpentine), the same of spermaceti, and twice as much olive oil together in a cup over a slow fire till it begins to boil. Let it stand three days and rub gently on the face. Its use will cause marks of eruptions to disappear if not very deep. 4, consult a good physician.

EDITH AND MAUD. The secret of permanently removing superfluous hair has never been found, and no more questions on the subject will be received in this department. Charlotte Brontë is the greatest female novelist of our day, the most finished artist, with matchless power in depicting and moving the feelings, which is the test of the poet or novelist. George Eliot was a great writer, and deep thinker, but tried by this last and finest test, she must rank below the Yorkshire clergyman's lonely daughter.

THE WISE BLACKBIRD.



TALES OF THE PATHFINDERS.

BY ARTHUR GILMAN.

VII.

A NEW FRANCE.

ON the strait connecting Lake Superior with the lower waters of the great American system of inland seas, there is a small town lying in the territory of the present State of Michigan that possesses considerable interest, not because it has great buildings, grand scenery, or remarkable institutions, but on account of certain transactions that marked its history nearly two centuries and a half ago. On an autumn day, in the year 1641, a birch-bark canoe containing two Frenchmen and several Indians began a voyage to the westward through Lake Nipissing and the French River into the northern part of Georgian Bay. Thence it took a course among the beautiful islands in the upper part of Lake Huron and entered the long and devious strait that connects that body of water with Lake Superior. It stopped at a place where the broad stream passes over a fall, and when it touched the shore the passengers were cordially greeted by a company of two thousand Indians.

The Frenchmen were Jesuits, and they were inspired with religious zeal in thus travelling day after day in the frail boat; in thus venturing to distant regions among men whose very names sounded savage and whose ferocity was so great as to spread terror among all who made them their enemies. The Jesuits preached to their new friends the religion of the One God, which the Indians had never before heard; and as they were told of the still more terrible Sioux, living eighteen days' journey to the westward, beyond the Great Lake, they longed to go thither also to preach. Doubtless, they dimly saw in their imagination the future of our great West, like the poet heard

* * the tread of pioneers
Of nations yet to be;
The first low wash of waves, where soon
Shall roll a human sea.

No such good fortune as they hoped awaited the two missionaries, however. One of them soon wasted away with disease, and the other, taken captive twice by other Indians, was finally killed by them. Years passed on, and, at last, after thirty revolutions of the earth in its orbit, other minds were so far filled with the same sentiments of ambition for France and of longings to see vast accessions gathered into the Church, that they made another effort to extend the sway of the great Louis the Fourteenth over the Northwest.

The Jesuit missionaries had been all this time patiently going from place to place among the different tribes. Some of them had lost their lives, and all had suffered untold hardships, for the woods furnished few of the comforts to which they had been accustomed. One of these men had actually passed up through the strait that we have mentioned before, into Lake Superior; had sailed in his frail boat by the Pictured Rocks; had searched for the copper that he had been told could be found on the shore of the sacred lake (copper that he did not find, but which has since been discovered and now furnishes a foundation to many American fortunes); he had crossed its waters to the site of distant Duluth, and had actually seen the savage Sioux of which others had only heard. He had heard too, of a great river that he understood to be the "Messipi." For two lonely years he had continued his explorations, living for most of the time on the southern shores of the Lake, and when he returned to Quebec it was with the determination to make real the visions of a permanent mission that his forerunners had seen only as a beautiful possibility. It was in the year 1668, that in company with another priest, he actually established the mission of St. Mary, the oldest settlement within the limits of the present State of Michigan.

Meantime, interest in the Great West had wonderfully extended, and in far-away France the King and his Cabinet were discussing the oppor-

tunity presented to them for national aggrandizement. In 1661, Colbert became the Minister who directed the policy of that country, and he re-organized the colonial affairs, giving to Canada a feudal system, and inspiring the Intendant (the chief officer of the Crown at Quebec), with a determination to extend the boundaries of New France until they should stretch from the Atlantic to the South Sea, as the Pacific Ocean was then called, and from the lakes, through all the windings of the great rivers, to the Gulf of Mexico. The scheme was a vast one, but Colbert and the King on the other side of the sea, accustomed to measure king-



THE BLESSING OF THE CROSS.

doms and realms according to European standards of size, comprehended little of its magnificence. The Intendant, who represented the royal power in Canada, Jean Talon by name, knew more fully what it meant; but it was the Jesuit missionaries who had actually travelled through portions of the region, who best realized its grandeur, as well as the dangers and difficulties it involved.

Let us now see how Talon went to work to carry out the plans made in Paris by Louis the Fourteenth and his minister, Colbert. His chief work seems to have been to select the proper person to lead the expedition that he proposed to send

out, and this he did with more promptness than one would suppose possible at the time. Almost as soon as he arrived at Quebec, he ordered one Daumont de St. Luson to search for copper mines on the shores of Lake Superior and to call together representatives of as many tribes as possible at Sault St. Mary, the falls of which we have spoken before. Monsieur Talon was of an economical turn, notwithstanding the great wealth of France and of its master Louis, and perhaps in this he shows the influence of Colbert, whose time was then pretty busily occupied in economizing the income of the government, which, under his predecessor, Fouquet, had been lavished upon numerous subordinate officers. He showed his skill in this direction, when he wrote to the King the next year that this expedition would cost nothing to the government, because St. Luson had received enough furs from the Indians to pay all expenses.

St. Luson showed his fitness for the direction of the important affair by selecting as his executive officer Nicholas Perrot, one of the most conspicuous of all the early Canadian voyageurs, who could act as interpreter, for he spoke Algonquin fluently and had enjoyed a long and intimate acquaintance with the different tribes of Indians. He was a young man of twenty-six years, and had gained a strong influence over the dusky denizens of the woods. He entered upon his work with zeal, and sent messages to the tribes at the north and to those at the west to meet the representative of the Intendant at the appointed place in the spring of 1671. Everywhere welcome, Perrot succeeded in prevailing upon some fourteen tribes to appear by their representatives. Among these were the Sacs and Foxes and Winnebagoes, the Menomonies and Miamis, the Crows and Nipisings, and I know not what other outlandish tribes. As I write their names, I am reminded of Mr. Longfellow's list of those who came to smoke the peace pipe in a prairie of Dacotah. You will find it in *Hiawatha*.

Down the rivers, o'er the prairies,
Came the warriors of the nations,
Came the Delawares and Mohawks,
Came the Choctaws and Camanches,
Came the Shoshonies and Blackfeet,
Came the Pawnees and Omahas,
Came the Mandans and Dacotahs,
Came the Hurons and Ojibways,
All the warriors drawn together
By the signal of the Peace-Pipe,
To the Mountains of the Prairie.

Thus are we to imagine the tribes coming together at the Sault St. Mary from their winter hunting-grounds; some, probably, to fish in the rapids, and others to see the great man of whom Perrot had told them. From hundreds of miles distant they came; overland with their squaws and their papposes, or down the streams in their light

and graceful canoes of birch-bark. It was after the spring sun had loosed the icy bands of the waters and the green grass gave promise of the genial summer that was to come. They were met by St. Lusson and fifteen companions, among whom was a young man from Quebec, son of a wagon-maker, but educated in the learning of the Jesuits, of whom history will tell us more, Louis Joliet, and there were other Europeans, too, most of whom were Jesuits.

For several weeks the tribes continued to gather, and probably those who arrived engaged in the usual sports and in fishing. One fine day in June, however, all these gave way to a ceremony that impressed the Indians, and had historic importance.

In the morning, St. Lusson led his followers, fully armed and equipped, to the top of a hill near the fort of the Jesuits and overlooking the village of the Sauteurs. They were accompanied by the priests in all the splendor of their finest official vestments. As they looked about, they saw the wondering Indians standing, crouching or stretched upon the ground in the attitude of expectancy.

In silence, Dablon, the Superior of the Missions of the Lakes, stepped forward and pronounced a blessing upon a cross that had been prepared and at the moment lay prone in the midst of the scene. Then it was reared and planted in the ground, while the followers of St. Lusson uncovered their heads and burst out in song, saying in Latin,

*Vexilla Regis prodeunt ;
Fulget crucis mysterium,*

singing an old hymn that has been translated :

The royal banners forward go :
The cross shines forth with mystic glow :
Where He in flesh, our flesh who made,
Our sentence bore, our ransom paid.

There whilst he hung, his sacred side
By soldier's spear was opened wide,
To cleanse us in the precious flood
Of water mingled with his blood.

Fulfilled is all that David told
In true prophetic song of old,
How God the nation's King should be,
For God is reigning from the tree.

O tree of glory, tree most fair !
Ordained those holy limbs to bear ;
How bright in purple robe it stood,
The purple of a Saviour's blood !

Upon its arms, so widely flung,
The weight of this world's ransom hung :
The ransom he alone could pay,
Despoiling Satan of his prey.

With fragrance dropping from each bough,
Sweeter than sweetest nectar thou ;
Decked with fruit of peace and praise,
And glorious with triumphal lays.

Hail, altar ! hail, O Victim ! thee
Decks now thy passions' victory :
Where life for sinners death endured
And life, by death, for man procured.

To thee, Eternal Three in One,
Let homage meet by all be done :
As by the cross thou dost restore,
So rule and guide us evermore.

When the hymn had been sung, a cedar post was planted beside the cross, on which there was a plate of metal engraven with the arms of France, while the Frenchmen sang, still in Latin, "*Exaudi te Dominus in die tribulationis : protegit te nomen Dei Jacob !*" If you will turn to the twentieth Psalm, you can read in English what they sang, and you will see that it was a prayer to God for help and care, very appropriate for good people who trust in him. Listen to a few words of it :

The Lord hear thee in the day of trouble ; the name of the God of Jacob defend thee . . . We will rejoice in thy salvation, and triumph in the name of the Lord our God. . . . Save Lord ; and hear us, O King of Heaven, when we call upon thee !

This done, one of the priests stepped forth and uttered a prayer for the King. Then St. Lusson himself drew his sword, turned up a sod, and said in a loud voice (not in English, of course) :

In the name of the most High, Mighty and Redoubted Monarch, Louis, Fourteenth of that name, Most Christian King of France and of Navarre, I take possession of this place, Sainte Marie du Saut, as also of Lakes Huron and Superior, the Island of Manatoulin, and all countries, rivers, lakes and streams contiguous and adjacent thereunto : both those which have been discovered and those which may be discovered hereafter, in all their length and breadth, bounded on the one side by the seas of the North and of the West, and on the other by the South Sea : declaring to the nations thereof that from this time forth they are vassals of his Majesty, bound to obey his laws and follow his customs ; promising them on his part all succor and protection against the incursions and invasions of their enemies : declaring to all other potentates, princes, sovereigns, states and republics — to them and to their subjects — that they cannot and are not to seize or settle upon any parts of the aforesaid countries, save only under the good pleasure of His Most Christian Majesty, and of him who will govern in his behalf ; and this on pain of incurring his resentment and the efforts of his arms. *Vive le Roi !*

As soon as the last words passed from the speaker's mouth, there arose such a din as had seldom been heard at the Sault. The followers of St. Lusson fired their guns shouting at the top of their lungs, "*Vive le Roi !*" which meant the same as "God save the King !" and the untutored savages uttered those strange sounds so familiar to all who have seen specimens of the Indian tribes, which can be only described as a combination of grunts, snorts and yelps. This wild din closed the ceremonies of taking possession of the vast country ; but it was thought that one more effort

should be made to impress the Indians with the power and greatness of the nation that had come to take their land. This was made by that Jesuit missionary who had, as I have said, journeyed through the great Lake and heard of the river "Messipi."

I suppose that he took a commanding position on the hill where the cross and the French arms were raised and began a sermon to the motley audience. He pointed to the cross and explained what it meant—told them the story of Christ. Then he called their attention to the cedar post bearing the Bourbon lilies, and launched out into a long eulogy of France and its great king. He said that Louis the Fourteenth was the greatest chief on the face of the earth, that the most powerful chiefs in their regions were like the little herbs that one tramples under foot, compared with the spreading oak above them. Then he spoke of the governor of Canada, and expatiated upon his power, and declared that across the sea there were ten thousand like him, who were all warriors for the King of France, and marched forth at his bidding. He dilated upon the terror of his cannons, the vast number of his troops, the great ships that they sail over seas in, the prisoners he takes in war and the streams of blood that fol-

low his triumphant progress. He added, "But what shall I say of his riches? You think yourselves rich when you have ten or twelve sacks of corn, a few hatchets, beads, kettles and other things of that sort. He has cities of his own more than there are of men in all this country for five hundred leagues around. In each city there are storehouses where there are hatchets enough to cut down all your forests, kettles enough to cook all your moose, and beads enough to fill all your lodges. His house is longer than from here to the top of the Sault [that was more than half a mile] and higher than your tallest trees; and it holds more families than the largest of your towns." Thus the good Father ran on in his well-meant effort to impress the Indians with the greatness of the French, the futility of resisting them, and the desirability of falling into their habits and especially into their ways of worship.

Thus was the Northwest taken possession of by France. The gathered whites and Indians dispersed—the former meditating vaster plans of ambition, and the latter impressed with the power of the new-comers. The Indians took the precaution, however, to tear down the Bourbon lilies from the cedar post, lest the royal arms might prove a dangerous charm against them.

IN CASE OF ACCIDENT.

BY DR. D. A. SARGENT.

VII.

THE STOMACH.

IN order to sustain life, and to make good the losses of the body resulting from the various kinds of vital activity, food is necessary. This is first introduced into the mouth where it is masticated, and thence conducted through a long muscular tube, called the alimentary canal, into the stomach.

The stomach is a large muscular sac surrounded with blood vessels, nerves, etc., and is closely connected with all the other important organs of the body.

The walls of the stomach secrete an acid fluid, called gastric juice, which exerts a chemical action upon the food and prepares it for assimilation. The stomach is so sensitive that as soon as any substance is introduced into it, its walls contract, and roll this substance about until it is thoroughly mixed with the stomach-juices, after which it pushes it on into the intestines. Here the nu-

tritive element is taken up by the lymphatics and through them is conveyed to the blood. Anything that interferes with the action of the stomach, either by restricting its movements, checking its secretions or injuring its walls will interfere with digestion; and if the disturbance is very great, will even imperil life. For this reason, too much care cannot be given to the choice of foods. Diseased meat, stale fish, decayed vegetables, etc., often give rise to much distress. Sometimes, too, active poisons are taken into the stomach by mistake. Unless these are quickly removed, the walls of the stomach and alimentary canal are irreparably injured, and death may be caused either by the absorption of the poison into the blood, or by the effect of this poison through the nervous system upon the vital organs.

POISONS.

As many substances now in common use are of a poisonous nature, and as accidents resulting there-

from are of frequent occurrence, a few hints with regard to the treatment of such cases may be of service.

Poisons may be divided into three classes: Animal, Vegetable and Mineral.

When considering their effect upon the body, poisons may be divided into *Irritants*, *Corrosives*, and *Narcotics*.

The effect of *Irritants* (such as *cantharides*, *chlorine gas*, *carbolic acid*, etc.) upon the tissues is implied in the name. The irritating action takes place in the mouth, the alimentary canal and the stomach.

The *Corrosives* (such as the *caustic alkalies*, and the *mineral* and *vegetable acids*) tend to break down and destroy all parts of the body with which they come in contact.

The *Narcotics* (such as *chloral*, *belladonna*, *alcohol*, etc.), may pass through the throat into the stomach, and thence into the intestines and blood, without doing immediate harm to these parts. The real injury does not begin until the poison introduced into the blood reaches the brain and nervous system.

This knowledge as to the action of poisons at once suggests the nature of the remedy. Before referring to the treatment of special poisons it will be well to consider briefly the first treatment for

POISONS IN GENERAL.

When poison has been taken into the stomach, ascertain, if possible, its nature; then send for a physician. In the meantime, whatever the nature of the poison may be, efforts should be made to rid the stomach of it.

The old-fashioned way of doing this was by means of the stomach-pump; but as these instruments are difficult to find in time of need, it is not safe to rely upon them.

First, then, try to produce vomiting by running the *finger down the throat*, by frequent draughts of *warm water*, or by a solution of *ground mustard*, or of *common salt*. Mix a tablespoonful of ground mustard in a glass of water. Of this mixture give the person two or three draughts, followed by twice the quantity of warm water. Repeat this dose until vomiting is produced. A tumbler of warm water in which a teaspoonful of salt has been dissolved, often serves the same purpose.

If vomiting is not produced by this means, give emetics. Of these, the most commonly used are *sulphate of zinc* (twenty to thirty grains to a teacup full of water), and *ippecacuanha* (fifteen to thirty grains to a teacup full of water). Follow the use of either of these emetics with frequent draughts of warm water. Hardly too much of this simple remedy can be taken. If there is any difficulty in getting the person to swallow, and if the stomach still retains its poisonous contents, efforts should be made to pour the water down the throat. Sometimes this can be done by means of rubber tubing.

After this tubing is introduced into the throat and extended to the stomach — which is, of course, filled with water — the contents may be forced to run out by holding the mouth of the tube below the level of the stomach. By this means the stomach can be repeatedly and thoroughly washed out.

Some of the poison, however, may already have reached the intestines.

To allay its effects in these parts, large quantities of *milk*, and *white of egg*, should be given; and *flour*, *barley* or *gum arabic waters* should follow some poisons as soothing lotions. Large doses of *castor oil* are frequently of service in hastening the passage of the poison through the intestines.

When the nature of the poison is known, the right antidote may often be given without delay.

IRRITANT POISONS.

Iodine. ANTIDOTE: *Starch in water.*

Cantharides. ANTIDOTES: *Emetics, opiates* and *demulcents*, but *no oils*.

Phosphorus. ANTIDOTES: *Magnesia*, and *oil of turpentine*.

Chlorine Gas. ANTIDOTES: *Ammonia*, cautiously inhaled, *creosote*, *carbolic acid*, *white of egg* and *albuminous substances*.

Carbonic oxide and other *asphyxiating gases.* ANTIDOTES: *Cold affusions*, *artificial respiration*, and *electro-magnetism*.

Carbolic acid. ANTIDOTE: *Whites of five or six eggs.*

Drastic (active) cathartics (such as *jalap*, *croton oil*, *podophyllum*, *elaterium*, etc.). ANTIDOTES: *Opiates*, *demulcents* (such as *gum arabic*, *slippery elm bark*, *starch*, *arrowroot*, etc.) and *stimulants*.

CORROSIVE POISONS.

Ammonia, *soda*, *lime*, *potash*, etc., are very active poisons and tend to corrode and injure the parts with which they are brought in contact. There is no time for the use of emetics. The poison is an alkali, and an acid is necessary to neutralize it. *Common vinegar*, *lemon-juice*, *citric* or *tartaric acid* in solution, and the fixed oils (as *castor*, *sweet*, *linseed* and *olive*) are the best antidotes to alkaline poisons.

Mineral and *vegetable acids*, *acetic*, *muriatic* and *sulphuric acids* in full strength, are exceedingly corrosive in their effect upon the tissues, and should be combated at once with an alkali. The *carbonates of soda*, *lime*, *potassa* or *magnesia*, may be used as antidotes. The *carbonates of magnesia* and *lime* are the only safe antidotes for *nitric* and *oxalic acid*.

Milk, *oils*, *white of egg*, and *flour and water*, are useful agents to protect the throat and stomach from the action of the corrosive poisons.

Some of the other *Corrosives* with their antidotes are as follows:

Corrosive sublimate, soluble mercurial salts, soluble cupric salts. ANTIDOTES: *White of egg, milk, flour and ferrocyanide of potassium.*

Arsenic, contained in Paris Green and many fly and bug poisons. ANTIDOTES: *Hydrated oxide of iron, hydrated magnesia.*

Lead. ANTIDOTES: *Sulphate of magnesia or soda and other alkaline substances.*

Nitrate of Silver. ANTIDOTE: *Common salt.*

Zinc. ANTIDOTES: *Albumen, magnesia and sodium carbonates.*

NARCOTIC POISONS.

Opium, chloral, alcohol and calabar bean. ANTIDOTES: *Emetics, cold affusions, counter-irritation, muscular exercise, strong coffee, hypodermic injections of atropia, artificial respiration.*

Belladonna, hyoscyamus and stramonium. ANTIDOTES: *Emetics, cold affusions, cathartics, hypodermic injections of morphia, electro-magnetism.*

Tobacco, aconite, lobelia digitalis, conium and veratrum viride. ANTIDOTES: *Emetics to empty the stomach, Cannabis Indica, alcohol and the diffusive stimulants.*

Strychnia, veratria. ANTIDOTES: *Opium, conium, tannic acid, camphor, chloral, bromide of potassium, atropia, ether, or chloroform.*

It will be observed that many of the antidotes are poisons themselves, and if taken in too large quantities their effects would be injurious.

Powerful remedies, therefore, should be given with caution, and always with the advice of a physician, if one can be had in time to meet the emergency.

WAYS TO DO THINGS.

BY ANNIE MOORE.

XXI.

HOW TO MAKE BLACKBERRIES.

WHEN my sister and I were little girls, a kind friend once delighted our hearts by teaching us how to make artificial blackberries.

We made a bunch for our mother as a Christmas gift — all the more acceptable, no doubt, that ripe blackberries are rare at that season.

They were so wonderfully natural, that we felt called upon to warn her not to try to eat them, for that would have spoiled our handiwork, besides being an unpleasant thing to do, as they were made of wax and rosin.

It is a simple process. I have just been experimenting a little, in order to be able to tell you exactly how to do it.

The materials needed are beeswax, rosin, black powder ("lampblack," I believe), small wire for stems, green tissue paper, a two-pronged, steel table-fork, or a piece of large wire, a tin dish, and one or two common plates — not a very expensive or troublesome outfit.

Buy four or five cents' worth of common rosin, and a little lampblack, at a shop where house-painters' materials are sold. Borrow an old tin dish of the cook. Put about half the rosin, more or less, into the tin dish, with a piece of beeswax as big as a nutmeg, and a little of the black powder — I feel sure that this was common lampblack.

The powder is to color the rosin, and only enough is needed to make it look black.

The wax is to prevent the rosin from being brittle. Too much wax would make it too soft.

Put the tin dish on the fire or stove, and let the wax and rosin melt, being careful that it does not take fire.

When it is melted, dip the fork (or wire) into it, and drop it from the fork on the plates.

It will run off the prongs of the fork in small drops like the little divisions of the blackberry.

When you have made enough of these drops — it takes forty or fifty of them for one blackberry — lay a piece of wax near the fire till it is so soft that you can shape it with your fingers into a foundation for a berry. Then take the drops of rosin from the plate — one by one, as you wish to use them — and arrange them round and round on the wax foundation, until it is covered, pressing the drops on the softened wax so that they will stay.

Make as many berries as you choose for a bunch — five or six, or more — then cut the small wire into pieces for the stems, wind them with the green paper, and stick one into each berry. Then twist the stems together and make them look like a bunch of real blackberries. A few blackberry leaves, natural or artificial, can be added if you wish. Or you can lay the blackberries into a saucer without any stems.

If you have done it nicely they will look very tempting, and quite like ripe blackberries.

LITTLE BIOGRAPHIES.—HOW SUCCESS IS WON.

BY SARAH K. BOLTON.

VII.

WILLIAM M. HUNT.

THERE is no royal road to art. The ascent of the glittering ladder is no whit easier than the exploration of the wilds of Africa, by a Stanley, or the accumulation of seven millions by a Johns Hopkins. The essentials of a success, persistent work and indomitable will, have never been other since the days of Adam. Certain, too, is it that the story of most artists is the old story of long poverty and long struggle, before victory.

Giotto, the "regenerator of Italian art," was the son of a herdsman, and he tended sheep near Florence, using his spare time in drawing pictures of his flock on flat pieces of slate with a pointed stone. One day the great painter, Cimabue, saw the unlettered boy of fourteen intently at work, and he asked him if he would like to go home to learn his art with him. Giotto's father consented, and by and by the shepherd-boy surpassed his master. Pope Boniface VIII. summoned him to Rome, and kings were eager to purchase his paintings. He created a new school of art, built the famous Cathedral Tower at Florence, which Longfellow calls "The builder's perfect and centennial flower," and of which Ruskin says, "Power and beauty in the highest degree exist, as far as I know, only in *one* building in the world—the campanile of Giotto. It is the model and mirror of perfect architecture."

Dannecker, the great German sculptor, was the son of an ignorant stable-keeper, but he had a refined and aspiring mother who fostered her boy's artistic tastes. He worked in the stable till he was thirteen, but whenever he could, he stole off to the yard of a stone-cutter and there he staid and covered the marble slabs with his designs, although he well knew he should be beaten by his rough father for what would be considered idleness. At last, he set forth into the world and walked to Paris, and there, always hungry and always meanly clad, he worked for two years in the Louvre. Thence he walked on to Rome; and though often discouraged and heartsick, he devoted himself untiringly to his art. At fifty years of age, he made his celebrated Ariadne, a beautiful woman reclining on the back of a panther, a masterpiece of sculpture, which draws thousands every year to Frankfort. Fortunes have been offered for it, but money cannot buy it from Germany.

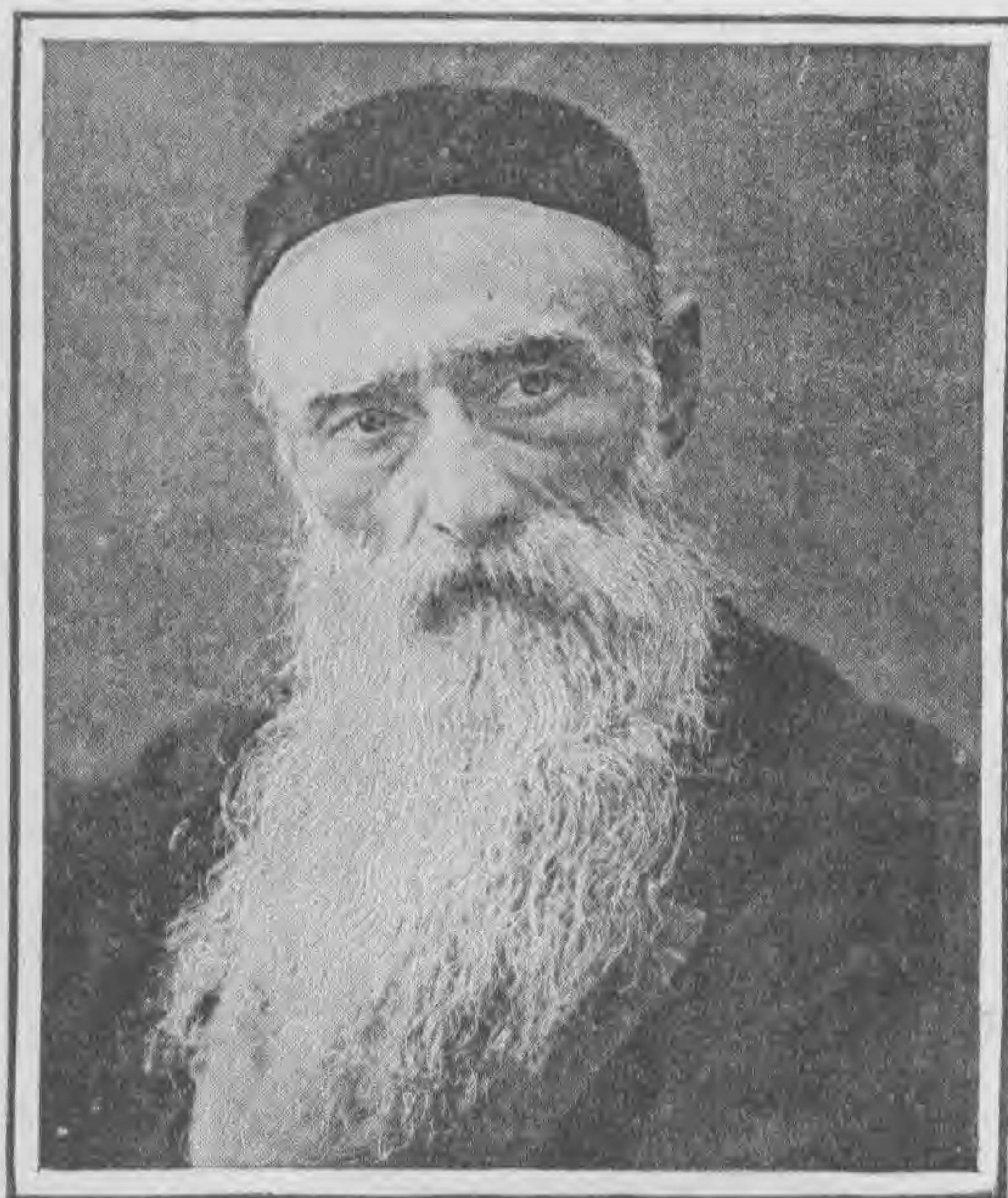
For eight long years too, Dannecker worked upon his famous statue of the Christ, which was purchased by the Empress of Russia for her son Alexander I. Goethe and Canova were proud to become the intimate friends of the man who was once a stable-boy.

Thorwaldsen, the great Dane, was the son of a poor wood-carver and a peasant mother, and he had the same bitter struggle with poverty. It is the old story: shy and melancholy, teaching drawing and working with his father; going to Rome on an academy pension of ten dollars a month; sending his work back to Copenhagen for sale, which nobody wanted because he was not famous; carving his Jason with the Golden Fleece, and breaking the cast because people only admired and did not buy; at last, after nine weary years at Rome, selling his humble furniture to go back to obscure wood-carving in Denmark—when, lo! the tide turns—a rich man from England sees his work, orders a Jason in marble, and Thorwaldsen is thenceforth famous. Now the academy at Copenhagen sends him five hundred dollars as an expression of pleasure in his work. How much more he had needed it when he lived, half-starved in his comfortless studio! But the world has few smiles for the struggling, but ah, how many smiles when the struggles are over. Many a poor fellow fails just at the border-land of success, when a little more self-reliance and faith in self, and persistent effort, would have won!

Hiram Powers, in our own country, is another remarkable instance of hard-earned success. His story, too, runs the old way: He was born on a bleak Vermont farm, the eighth among nine children, his family removing to Ohio where, by the death of the father, all the children were obliged to work for their own support; he himself was first a clerk in a hotel reading-room, then in a produce store; then he collected debts for a clock maker; afterward, for seven years, he took charge of wax figures in a Cincinnati museum; then he learned to model in plaster from a German—working, trusting, hoping, in this fashion till he was thirty. Then the long path of toil turned, but it turned as it usually does, only by his own determined effort to tread a new way. He resolved to go to Washington, and try his hand at modeling busts of distinguished men. But for such bold venture, he might have spent his life among the wax figures. Two years later, with a little money laid by, and some aid from Mr. Nicholas

Longworth of Cincinnati, he started for Florence. In one year his statue of Eve was finished, which Thorwaldsen said was a work any sculptor might be proud to claim as his masterpiece. Not long after, his Greek Slave made him famous. The first copy is in the gallery of the Duke of Cleveland; the second is in the Corcoran Art Gallery at Washington; the third belongs to Earl Dudley, and a fourth was purchased by A. T. Stewart of New York for eleven hundred dollars. His bronze statue of Webster in the State House grounds, is familiar to all Boston boys. I went to his beautiful home in Florence, as to a shrine, but alas, the great artist had gone out from its doors forever.

Without the struggle of poverty, to be sure, but



WILLIAM M. HUNT.

amid the struggle of absorbing, tireless, enthusiastic work, another artist came to occupy the foremost position in American art, William M. Hunt. Boston knew he was a great artist while he lived; she will be constantly confirmed in this belief as the years go on, and the great world will finally acknowledge a master. We are so busy a people, making great fortunes and building elegant homes, we are so eager to discover a new oil well or a new coal or silver mine, that we have little time to discover a genius, even though he live next door.

Fortunately, the boy, Hunt, had a mother of great—yes, remarkable talent—perhaps it would be difficult to find a great man whose mother was

not a superior woman. Mrs. Hunt, it is believed, would have been a famous painter also, had not her father, like others in those days, thought it unwomanly for a girl to be an artist, and forbade her, absolutely forbade her, to touch the brush. She married early, and after four sons and a daughter were born, her husband died, leaving to her the education of the children. An Italian artist coming to the town, she took him into her home, and mother and children began to study art together and in earnest.

William, at twelve, carved small heads in marble, and later, in shell cameos. Fond of music, at fifteen he played on the piano and violin. His brown eyes were full of fun, and his sensitive, joyous nature, with his deep sympathy, won hosts of friends. At sixteen he entered Harvard College, but failing in health, yet not discouraged, at nineteen left the University and went to Italy. Here he made the determination to become a sculptor, and for two years, part of the time in Dusseldorf, he studied drawing and the anatomy of the human body. Later, in Paris, he became the pupil of Thomas Couture. There he worked long and patiently with the brush. He doubtless thought with Turner: "I know of no genius but the genius of hard work."

Years after, he said to his class in Boston: "You don't know what persistent effort is! Think of the violin student in the Paris Conservatoire, who was more than a year trying to bend his thumb as he had not been taught to do in the provinces!"

"When I was a little boy I wanted to learn the violin, but a certain man discouraged me. 'Don't learn the violin! It's so hard!' I could kick that man now." So annoyed was he that anybody should shrink from hard work—it seemed to him the most fatal of all weaknesses.

At another time, he said: "Be earnest, and don't worry, and you will learn twice as fast. If you could see me dig and groan, rub it out and start again, hate myself, and feel dreadfully! The people who do things easily, their things you look at easily, and *give away* easily!"

"What if Michael Angelo had done his work in the Sistine Chapel easily! An artist one day called upon Grisi, found her upon a sofa, weary and forlorn. He expressed his surprise at her appearance, declaring that she was the one mortal whom he had envied, such was her strength, buoyancy and joyousness. He had not thought she could find life a burden. 'Ah,' said she, 'I save myself all day for that one bound upon the stage. Not for worlds would I leave this sofa, which I must keep all day that I may be ready for my work at night.'

"Inspiration is nothing without work. What we do best is done against difficulties. Work while your brain is full of the picture before you.

Work is a stimulus to work, and loafing a stimulus to laziness."

While in Paris, he became enthusiastically fond of Jean Francois Millet who was then struggling with poverty.

"For years," said Mr. Hunt, "Millet painted beautiful things and nobody looked at them. They fascinated me, and I would go to Barbison, his home, and spend all the money I could get in buying his pictures. I brought them to Boston. 'What is that horrid thing?' 'Oh, it is a sketch by a friend of mine.' Now, he is the greatest painter in Europe."

When Mr. Hunt was thirty-one, he came back to America to live. He had then painted his great painting of the Prodigal Son, leaning on the breast of his father, his exquisite Marguerite plucking leaves from a daisy, and several other works now well known. There was less art culture among our people then than now, but he had courage and hope. He opened a studio in Newport, and for seven years painted portraits mostly. His standard was high. He lived in his art; was wedded to it. He said, "You want a picture to seize you as forcibly as if a man had seized you by the shoulder! Strive for simplicity; not complexity! Don't talk of what you are going to do! Do it." There is a man for you who was building his fame upon the foundation of thorough work.

Once, when asked by a lady how long it had taken to draw a charcoal picture, he replied, "I think it took me an hour or two; but I suppose I ought to say that it took me forty years, as I've been drawing about that length of time."

Witty and brilliant in conversation, kind to everybody, especially to young artists, he became the centre of a circle of charming and earnest people. He hated shams and affectations. Once when asked what he thought of a young painter of foppish appearance, he replied, "I don't know him. I know his clothes. I can have nothing to do with such a man when I meet him; I look right through, and beyond, and around him." But he criticised all work tenderly as all great masters do, saying, "Don't look too hard except for something agreeable. We can find all the disagreeable things in the world between our own hats and boots."

He was as genuinely simple, too, as he was genuinely great. One morning as he came out of his studio on Tremont street, he met an old woman on the stairs carrying down a big box of ashes. He at once assisted, and together they placed it on the sidewalk, quite to the surprise of some of his kid-gloved admirers.

When our artist was forty-three, and fame and wealth had both been won, and time was precious, he gladly opened his best studio to teach a large class of women. How it broadened and beautified the lives of those learners! How small seemed

the round of shopping and making calls, after studying with such a master! His presence was magnetic, raying out inspiration. One of his ablest pupils (Miss Helen M. Knowlton) now a well-known artist, used to jot down on bits of paper in the class-room some of his brilliant words and suggestions; and so important were they that in book form they have been heartily welcomed both in Europe and America. Indeed the volume is used as an art text-book in some of the normal schools.

Five years after this, the great Boston fire swept away much of the tangible labor of his lifetime, but he met his loss bravely, and began work afresh, toiling harder than ever. He said, "Painting, for me, is the only work worth doing, and there is no other play." "Draw whatever fascinates you. Love something and paint it," was often his advice. Sometimes envious people spoke of him as the one-man-power in art in Boston." But in his modesty he has been heard to say, "I've been at painting all my life, and I don't feel to-day that I know anything. I'm not sure that I can go on with a single one of these portraits that I have begun."

He studied incessantly. Veronese, Michael Angelo, Titian and Velasquez were his teachers among the old masters, and Millet, Delacroix, Corot and Turner among the modern. Of the latter he said, "One hundred years from now, Turner will be counted the greatest painter who ever lived. His color is wonderful! His color is iridescent. The Venetians could get such color only by painting transparently, but Turner is solid, clear, throughout."

In 1878 he was asked to paint two large pictures upon the walls of the grand State House at Albany, N. Y. He accepted, though shrinking from it, and for five months, before beginning the work, wrought at his plans. One of these great mural paintings represents the Goddess of Night in her cloud chariot; before her three restive horses, and behind her a sleeping mother and child. In the other, is depicted Columbus, standing in a boat in mid-ocean, with Hope at the prow and Fortune at the helm. So careful was he in the execution of these paintings that thirty charcoal drawings were made, also twenty oil paintings, and the colors were tested on stone sent from Albany. Then for fifty-five days, Mr. Hunt and his assistants painted on the walls from early morning till late at night standing on scaffolding.

When completed, in coloring and finish, the pictures were a triumph of art, but the artist had broken down in health. He sought the Isles of Shoals, hoping to find renewal of strength from the bracing and restful ocean breezes, but it was too late. One September morning the country was shocked to hear that the great artist was found lying peacefully in a little pool back of the cottages, dead. It

is supposed that he missed his footing, and no hand was near to help.

He died in the prime of life, at fifty-five; but his work lives on after him and is to live. Whether he painted Niagara or Gloucester Harbor, the Street Musician or the Drummer Boy, the Bugle Call or the Bathers, each of the paintings was like himself, strong, refined, instinct with life and feeling. Over four hundred of his pictures, those owned by friends and therefore not burned, were exhibited after his death, yet these probably did not constitute one third of his work. Among his best known portraits are those of Chief Justice Shaw, Governor Andrew, Charles Sumner and James Freeman Clarke.

It is to be noted that Mr. Hunt always honored, never debased, his art. Being shown a picture, very fine in technique, by a Munich artist, of a drunken man holding a half-filled glass of wine, he said, "It's skilfully done, *but what is the use of doing it?* The subject isn't worthy of the painter."

It is to be remembered, too, that he never wearied in his unselfish efforts to encourage and

develop art. "An *inclination* to draw evinces talent," he often declared. "I saw a beautiful sunset last night, and I would have given worlds for the power to put it upon canvas, even in the modest manner. That desire indicates talent. Will you use your talent or smother it? . . . Children should be encouraged; not flattered. With no help and encouragement, the child gradually loses its desire to draw." He persistently taught artists to be individual in their thought, not copyists, not followers after the manner of any school.

More than other American teachers, more than any other American artist, he has left his impress upon the working art talent of the time. His name is spoken reverently by earnest young artists. His paintings are sought and studied by art students who never saw him. Pictures often are characterized as belonging "to the Hunt school of art," and his influence is most surely to survive in art.

Surely, his successful life emphasizes what Sidney Smith said of greatness: "There is but one method, and that is hard labor."

ANNA MARIA'S HOUSEKEEPING.

BY THE NEXT NEIGHBOR.

XIX.

SICKNESS IN THE HOUSE.

YOUR mother sick, and Willie down with scarlet-fever? Well, old practical nursts took their first lessons sometime, in just such anxious trembling.

Willie should be upstairs, as all infections rise; the spores and scales which carry the disease, and the air of the sick-room naturally floating upward with the currents of air. If scarlet fever, measles, diphtheria, or any such disease, is in a lower room, the upper part of the house is almost certain to be infected, and persons sleeping there are in danger. The best place for such a case is the large chamber in the wing, cut off from the rest of the house by the side entry, where the patient is away from the sights and sounds of the living rooms, and it is easy to keep them free from infection. I know a house where such a room with windows on three sides is called the hospital chamber, and every one taken sick in the family at once goes into it. The room is specially furnished for sickness, with nothing in it that can be spared, to absorb or give off bad air. The walls are not papered, for paper absorbs infection and bad smells, but they are

painted so as to be washed readily. There is no carpet for the same reason — the carpet of a room where has been diphtheria or scarlet fever holding the germs of disease ready to give it to another, long after the first patient is well. The floor is covered with matting to deaden sound, for matting can be washed with carbolic acid as well as boards, and so disinfected. The bed is a thin one of hair over a woven wire mattress, which makes the most luxurious soft couch, as provided in hospitals for weary, aching invalids. Over the hair bed is a rubber sheet to prevent the tick from being stained with medicine or dressings, over this an old blanket to keep the patient from chill of the rubber, and then the sheet. A set of thin, old blankets, and a light coverlet, easily washed, are kept for sickness, and are thoroughly washed with carbolic acid in the water, and boiled, after each case of sickness. You don't want to spoil good blankets by washing them and scalding as often as hospital bedding requires. I learned this care the year we had diphtheria, scarlet fever, and chicken-pox, rheumatism with its poulticings, and a bad case of tumor with lancings and dressings, all in seven months. That is the sort of training life puts us through sometimes.

By such costly lessons I learned the safety of putting a patient as soon as he sickens in a separate room, for you never know at first just what an ailment may turn out. The chill with slightly sore throat which brings a child to the lounge in the sitting-room for a day or two, at the end of that time proves to be scarlatina, or the gray diphtheria patches appear, and then to the care of the sick one is added the anxiety of knowing that its hot breath has been sowing the seeds of the disorder among the rest of the household. In sickness, if nowhere else, a care in time saves nine. It often saves life.

Have the room airy, with two opposite windows down at the top, and the bed out of the draft. It is better to have a fire in any weather when it is endurable, and keep windows open, for the draft carries away and consumes the bad air while drying and improving the fresh that it draws in. Keep the bed well out from the walls, so that air can circulate around it, and have, if possible, a lounge or small bed, in the same room so that the nurse need not lie down on the sick bed, which is not good for her or the patient either. An excellent old practice in infectious sickness is to burn sulphur in the room once or twice a day, sprinkling a teaspoonful on a hot shovel and carrying it around slowly that the fumes may fill all parts of it. It does the patient no harm, but rather much good to breathe it, if not strong enough to make him sneeze or choke, and inhaling sulphur fumes of moderate strength with open mouth kills the poison of diphtheria and ulcerated throats, while it greatly lessens the chance of other persons taking the disease.

A nurse should be very careful of her personal habits, bathe often, for her own refreshment and to keep her strength up, and wear fresh washable dresses, that neither rustle nor crackle with starch. I have been so annoyed with well-meaning women who would take away my breath as they bent over me with odors of perspiration, and hair not kept with nicety, that seemed to smother the feeble strength left in me. And the chattering nurse who persists in talking a weak patient light-headed—is there any visitation to be compared with her in horror! Above all things learn to shun the art some people have of talking endlessly and saying nothing, mincing their subjects fine we may say. As I have heard a weakish personage of that sort go on, when she knew one was waiting hopelessly for rest and silence with a tired head, "I won't disturb you, but I just thought I'd ask you so as not to have it to say again—very many people don't like it so but I can't know of course without asking you, and opinions vary so much you never can tell—now don't say one word and exert yourself as you ought not to indeed—but *will* you have the window-shade down?" Don't let your ideas flow through your tongue till it must tremble like

the magnetic needle, and the senseless words utter themselves till the nervous patient nearly takes leave of sense and sanity together. Learn how to talk in a sick-room. Don't talk loud or fast, in the chatter which young women imagine is conversation, say little at a time, three or four sentences, not more, and then rest, and don't expect answers. It diverts a sick person and soothes him to hear two other people talking fresh gossip when he is not expected to join, rather than be talked to himself, only the chat should not be long. O, it is with a long apprenticeship in sickness one's self one comes to know how light and sound and exertion affect an invalid, to learn what nervousness and weakness are, and how little things sometimes send the forces ebbing back to faintness and failure which had set hopefully toward health and safety.

As much depends on the food of your patient as on medicine. If one ever learns the right value of food and drink it is over a sick person, when the processes of strength and growth alter with a few spoonfuls more or less of the right kind of nourishment, and you feel the pulse sink under your finger for want of the draught of beef tea, or sip of wine and milk, which keeps the fluttering strength alive. Many a patient in a fair way of recovery has been lost for want of good food to restore the lost vitality. You need to learn much to cater for the sick: to give fever patients lemons, acid jellies—not fruit jellies made with sugar—but gelatine flavored with wine and a breath of spice, little piquant soups, a few spoonfuls of which revive one so much, and which the system absorbs as a sponge drinks water, almost, apple pulp scraped with a silver knife, or the juice from the ripest of strawberries, given drop by drop, together with barley water made in the good old way with lemon-juice and sugar candy, and calves-foot jelly, blandest and most blissful of foods. Nervous and weakly patients who need building up require strong broths without a drop of fat in them, savory roast chicken, game and such essence of meat as we get by putting five or six pounds of the neck or shoulder of beef in a stone jar, covering tight without one drop of water and baking in a moderate oven two hours. The jar will be found half-full of the richest gravy which is the very thing to build up nerves and brain. A cupful of this gravy heated scalding hot, with a fresh egg dropped in, and toasted oatmeal crackers, is a very hearty meal for an invalid. But remember, all food for a sick person must be the freshest best quality, for anything stale or injured which a healthy system might get over will hopelessly derange a feeble one. Remember, also, that if half the care were given to the health of well people that we take to cure invalids, there would be very few sick. Humor the fancies of your patient all the doctor will allow. If there is a craving for any one thing in particular, whether it

is roast chicken at midsummer when chickens are scarce, or oranges out of season, guava jelly or velvet cream or white grapes, get that very thing if you can, and say nothing about the trouble of getting it. That will worry all the pleasure out of a weak patient, when to gratify his taste may be the turning point to health. It is wholesome for people in this world to have their own way about their personal habits anyhow, sick or well, always provided it does not interfere too much with the comfort of others, and to the sick everything should give way. Lay this rule to heart.

It may seem hard to give up talking or singing in the near rooms because it worries Willie or your mother; and I have heard well people pettishly protest against "giving in too far to the whims of sick people," and talking pretty loudly about the rights of healthy ones. I'm ashamed to say I have when younger said something of the sort myself. It was treated as very ridiculous by a party of summer visitors that a well-known authoress left her seaside house every night to get sleep at a lonely cottage away from all sounds. Bitter complaints were made of her sensitiveness when the fall of a hairbrush in a room overhead broke her uneven slumbers, and there was a good deal of spiteful criticism about "sheer nervousness," and "that sort of thing being a good deal cultivated." If those who are sound enough to go to bed and sleep every night, and pass unmoved by the sights and sounds of every day life, could once know the ordeal life becomes when night after night the brain is racked with waking till dawn, and the least stir spoils the chance of restoring sleep, and under such fatigue the nerves grow more and more acute till light, sound and conversation are misery—we would never hear any grumbling about sick people's fancies. I remember lying ill of brain fever when only twelve years old, and too young to have fancies, when the creaking of a door, or any sharp sound, sent shoots of pain through my head that I could hardly bear. And the old rooster would persist in crowing shrilly just under my window, torturing me when too sick to make my pain understood, till the loving little brother of three years old guessed the trouble and put the Saracen to flight. Take all pictures out of the room where a sick person lies speechless or light-headed, for they torment the helpless brain with unheard-of images. A lady once told me of the suffering caused her by the family portraits in her room when she was lying, as her friends thought, unable to notice anything. The faces seemed to become distorted and leave their frames in shapes of horror to attack her, day after day, and she could make no one understand what ailed her. For this reason, avoid strange, bold-figured curtains and wall papers in a sick-room—better avoid all figured things, for the very blankness of walls and space rests a fevered brain, however dull to a well one.

Don't fuss around a sick person whom even well-meant attentions worry. Even a bunch of flowers will sometimes "aggravate" one—in fact I think, from my own experience, a great deal too much is made of flowers and fancy attentions to sick people. I want a well-browned tender mutton chop, *sans* fat, gristle or bone, on a clean hot plate, without cracks or specks in the ware, a fresh napkin on the tray, and a thick, white towel to spread over the bedclothes to keep them from soil, some *good* bread, the best on earth is none too good for the sick, but no foolishness of flowers on the tray. Sick people don't want flowers and food together; the scent of the two doesn't combine well, and there may be insects on the leaves to get into the dishes. Bring the flowers in after the meal is all over, put them in sight in a vase, and say nothing about them till the patient's eye lights on them for himself. *Don't* put your hand on a sick person, even in the way of kindness, unless you are very intimate—the too familiar, frequent stroking of one's head is very annoying. In case of headache, ask if it would be agreeable to soothe it with your hands, and see that they are both cool and clean before you touch any one. A warm, moist hand never ought to touch another person, sick or well. If your hands are apt to be moist, rub them with the fine soapstone powder used for gloves.

Study all the arts of comfort for the sick. Better is good nursing without medicine than medicine without good nursing. Cool a fevered patient by bathing him in very hot water, and then fanning him, which will relieve much more than using cold water at first. Or lay wet cloths on the wrists and back of the neck, and fan them, which will soon cool the whole body. Wet a hot head on the top and sides and fan it to reduce fever or rush of blood to the head. This last, together with nervous headache, is often better relieved by the use of very hot water than by cold. When one suffers from chill, put on a flannel nightgown and woollen stockings and drawers, then put hot soapstones to the spine and feet, give the patient something warm to hold in the hands, and cover with blankets next to the person, which will warm him sooner than you can possibly do in a cotton gown and sheets. Hospitals have hot water cushions of rubber for sick persons to hold between their hands, but as water is sure to leak by nature, there is nothing so good for home heating as the old-fashioned soapstone slabs, of which every house ought to have a supply. Hot bricks are next best, because they hold a tempered heat a long time. Cover all compresses and poultices with warm dry flannel to keep the heat in, and be particular not to let the bedding remain wet when such things are in use, for the patient is easily chilled by damp clothing. Change sheets and blankets as often as the strength of the sick person will allow. It is not necessary to wash them, but they, as well as

as the nightgowns, can be hung in the sun, or thoroughly dried and heated by the fire, when they will be almost as sweet and fresh to put on as if newly washed. Hardly anything gives a patient more refreshment than the change from body clothes and bedding, charged with perspiration, smelling of poultices and lotions, to dry, sun-sweetened sheets and gowns. Night clothes and underclothes for the sick should never be made to slip over the head, but open all the way down for ease in changing; and where applications are to be made in the back, have everything button both back and front, or turn the garment round. Much inconvenience to nurses and fatigue to the sick is saved by these simple devices.

The doctor will prescribe for Willie, but I will tell you a common thing to relieve the smarting and itching, not only of scarlet fever, but measles, erysipelas, and all kinds of poxes and rashes from those made by mosquito bites down. It is carbolated oil: fifteen drops of *strong* carbolic acid to six tablespoonfuls of sweet oil or almond oil. Any pure sweet fat will answer if you cannot get the oil, but the acid must be of strength sufficient to heal the smarting, and if too strong will make it worse. You must test it on your own skin in some tender spot, or on a patch of the eruption. It ought to relieve in a moment. If too strong, add more oil, drop by drop. This is a hospital remedy, and you need not be afraid of it. When too strong, relieve the smarting by a little fresh oil without acid. Rub this oil over the entire body wherever

the eruption is seen, as often as the itching is felt. It not only heals, but lessens the chance of infection from the scales which it brings away at each bathing instead of leaving them to fall off in the bedclothes the carpet, or to float in the air, dealing disease wherever they chance to light. Burn oil bottle and the cloths you rub it on with, when the child has no farther use for them, and never let an article of any sort he has used or worn be carried into another room. Put all soiled clothing, sheets and towels into a bag hung outside the window. No matter if it doesn't look very nice, it is better than giving the entire house a chance at the fever. When things are to be washed, lower the bag to the ground and if possible do the washing out of doors, boiling all linen and cotton things an hour in clean water to which strong disinfectants have been added. The room with all bedding and furniture is disinfected, when the physician pronounces it safe for the patient to go about, by closing doors and windows tight, spreading blankets, mats and clothing wide over chairs and railings in it, and fumigating. Have a shovel of hot coals placed where it will not set anything on fire in the room, sprinkle on two large handfuls of powdered sulphur, and leave the room shut up over night. You will want to leave all windows open wide all the next day and the day after, if not for a week to get the sulphur smell out, but you will not have to dread that any one who enters risks taking the disease, for a year after. The fumigation is the same for all infectious diseases.

DAYS AND NIGHTS IN THE TROPICS.

BY FELIX L. OSWALD.

CHAPTER X.

MONITO IN A SCRAPE.

We reached that ridge at ten o'clock the following morning. After breasting a steep slope strewn with icy rocks and volcanic ashes, we came to a level snow field, and stood on the roof of our continent; we had reached the Plateau of San Lucas. In the west a whole world of hills and plains seemed to be spread out under our feet; wild rocks, the deep green woods of the foothills, then the light blue plains, and between land and sky the glittering expanse of the Pacific Ocean with its cliffs and rocky islands. In the south rose the volcanoes that formed the chimneys of the fire-world under our feet. The guide had been right;

the Peak of Antisana was veiled in the haze that follows a violent eruption, but the Sangay, the Pinchincha and the Canyadas stood up bold and clear against the blue sky, and in the east our plateau rose in terraces towards the great snowpeak of the Cotopaxi.

These terraces were, on the whole, the most interesting part of the whole panorama. Every puff of wind stirred up a whirl of snow-clouds that chased each other along the brink of the precipice, or flew through the air like a swarm of white-winged birds. Where the wind had piled the snow into drifts the alternate action of the noontide suns and night frosts had formed enormous icicles that hung from the rocks like inverted steeples, till they could not support their growing weight, and fell from cliff to cliff with a ringing clatter, as

if the roof of the crystal palace were coming down at a fell swoop.

And high above this playground of the mountain-spirits rose the majestic peak of the Gran Cerro with its crest of everlasting snow and its equally eternal smoke-column, now reduced to a thin wreath, for it is a curious fact that the volcanoes have their fits by turns, as if the furnace could use only one chimney at a time.

We tethered our mules at a warm spring, and as the morning was rather too windy for an ascent of the peak, I placed my pocket-album on one of the *mesitas*, or flat-topped rocks of the plateau, to

the waters of its subterranean lakes; and only twelve years ago a stream of molten lava set the foothills afire, and caused a disastrous inundation by obstructing the valley of the Rio Corso. The village of San Lucas is protected by the cliffs of the northern slope, and as the great eruptions announce themselves by the increased volume of the smoke-column, the inhabitants have generally time to seek the shelter of their rock-built cabins, and the chief dread of the miners is the explosion of the *padrazas*, or stone-showers, which often break out without a moment's warning and rake the plateau as if a masked battery were scattering its messengers of death. My guide described a case where a party of gold-washers were obliged to throw themselves flat upon their faces while the volleys of the Gran Cerro came down like a hail-storm, together with larger rocks that rebounded from the cliffs as if the Titans of old were indulging in a game of nine-pins.

I had not yet finished my drawing when I saw the Captain snatch up his gun and run towards the spring where we had left our mules and travelling bags. Thinking that somebody had come to grief, I thrust the sketches into my coat pocket and followed the Captain as fast as I could.

"What is it," I called out, "a puma?"

"No; Mr. Mischief here," laughed the Captain. "Monito in a scrape, as usual. He's found a condor's nest, and is going to have his ears jerked off if the old ones get after him."

While I was busy with my sketch of the Cerro, Benny had clambered around the western cliffs, and seeing a condor fly up from a ledge of rocks further down, he had crawled out to the edge of the precipice and discovered two *pollos*, or chicks, as the natives call the young condors. The mule-boy was not far off, and fearing that somebody or other would be beforehand with him, Benny at once fetched the saddle-rope and tried to capture the chicks by means of a dangling lariat. The *pollos*, however, defeated his attempts by ducking their heads, and before another minute the old ones would have taken a hand in the game, when luckily the screaming of the chicks attracted the attention of the Captain.

In the meantime I too had fetched my shot-gun, and as the hen-condor was circling around the upper cliffs of the Cerro, we all crouched down behind a rock, awaiting the advent of the giant bird.

"It's none of my business, caballeros," said the guide, "but I am afraid you are going to waste your powder. You cannot kill a condor with buck-



A ROCK AVALANCHE.

make a sketch of the western crater which has more than once scattered the ashes of its fire-storm as far as Callao on the seacoast of Peru. During the great eruption of 1803, it treated the lowlands to a shower-bath of hot mud, mingled with millions of the curious fish-like lizards that seem to inhabit

shot; the lead glances off or gets stuck in the feathers. Something may depend on the distance, but I have seen it tried at short and long range, and it's no use; the feathers are too thick for anything but the heaviest kind of rifle-balls."

"Never mind," said the Captain; "I reckon it also depends on the way you shoot. Look out! Here she comes!"

We heard the rush of the mighty wings and then a grunting sound, resembling the croak of a raven at sight of a hawk. The condor had seen us, or at least Benny's dangling rope, for she wheeled to the left about; but in passing the rock she came in sight for a second, and in that moment our two shots went off together.

"*Que he dicho* — I told you so," said the guide; "there she goes; the shots glanced."

With three or four flaps of her enormous wings the condor had raised herself to a height of some two hundred feet, and darted off to the left, but still rising and rising, till her form would have faded in the distance, if the sky had not been so perfectly clear.

"Glanced off? — I don't know about that," said the Captain; "she has caught it somehow or other, just look at her."

The condor had again begun to wheel in a circle, but in a strange, unsteady way, till she suddenly turned her wings and shot off in a slanting line, and then came down, like a meteor from the sky, and as near as we could judge, dropped somewhere in the distant mountain forests of Rio Blamba.

After that it would have been shameful to leave the poor chicks to their fate, for the male condor rarely feeds its young. So we weighted our rope with a stone, and after pushing the pollos from their rock, sent down the mule-boy to fetch them up by a roundabout way. They were frightfully ugly, pot-bellied and studded with bristles, instead of feathers, but one of the menagerie commissioners was an English naturalist and a great admirer of birds, and we wanted to make him a present of the delightful pets.

We reached San Lucas a little before noon, and after getting all the information I wanted, we engaged an extra guide who was going to show us a trail to Elmonte from where we could reach the coast-plains in less than a day. Our new pioneer was a mere *mozo*, a lad of fifteen or sixteen years, but had already weathered many a storm on the Sierra, and gave us a lively description of the risks and adventures of a miner's life.

"How much a day do you make at that business?" I asked him.

"Oh, that depends on luck," said he: "some of us have made as much as fifteen dollars in half an hour, and others work all day and don't find the weight of a cherry-stone. But living is cheap

here; one *real* (about fourteen cents) a day will keep a man from starving. And who knows? Some of these days I might come across a *bonanza del sol* — the treasure-nugget that can only be found



THE CONDOR'S NEST.

at sunrise — and that would pay one for all hardships and all dangers."

"Are you not tired of that sort of business?" asked the Captain when we reached the settlements and our guide was about to bid us good-by; "it's all the same to me, but

I think you should try your luck in a place like New Orleans, where these gentlemen come from, a country where they have no Sierras at all, and no earthquakes or stone-showers."

"Are there any gold-diggings in that place?" asked the Mozo.

"No gold-diggings," said the Captain, "but you can make money in-doors, and in a much easier way — we could get you a place in a shoemaker's shop or in a cotton factory."

"No, thank you, Señor," laughed the boy; "if it is all the same to you I would rather go back to San Lucas."

(TO BE CONTINUED.)

WHAT TO DO ABOUT IT.

FRED BREWSTER. Magic lantern pictures can be sent by mail in a tin or pasteboard box, securely protected, but it is cheaper to get them by express in general. You can order them of dealers in photograph supplies, and the nearest photographer will give you their addresses.

WALFOLE. The Appian Way was the most celebrated of the ancient Roman roads. It was a roadbed, or rather pavement of huge blocks of hard stone fitted together like mosaic, and laid in cement. This pavement, built about 313 B. C., at first reached from Rome to Capua, one hundred and twenty-five miles, but was lengthened to Brundisium, the port from which the Romans sailed for Greece. Where this road has been reopened, it is found better than the best modern roads of to-day.

CLIO DE CIRE. 1. It would be much better for you to wear corsets, since your mother wishes you to do so, than to set up your will and wisdom against her. There is something to be said on both sides of the question, for and against corsets, but it is certainly neither wise nor becoming for a girl to criticise her own mother's views and ridicule them in the tone of this letter. Corded corsets can be worn with entire ease without the trouble of breaking whalebones and clasps.

CARRIE F. L. Try pyroligneous acid for warts and corns, protecting each by a bit of kid with a hole in it, which allows the acid to be rubbed on, without touching the surrounding skin.

Questions on cosmetics, skin disorders, the hair, nails, etc., are no longer in place on this page.

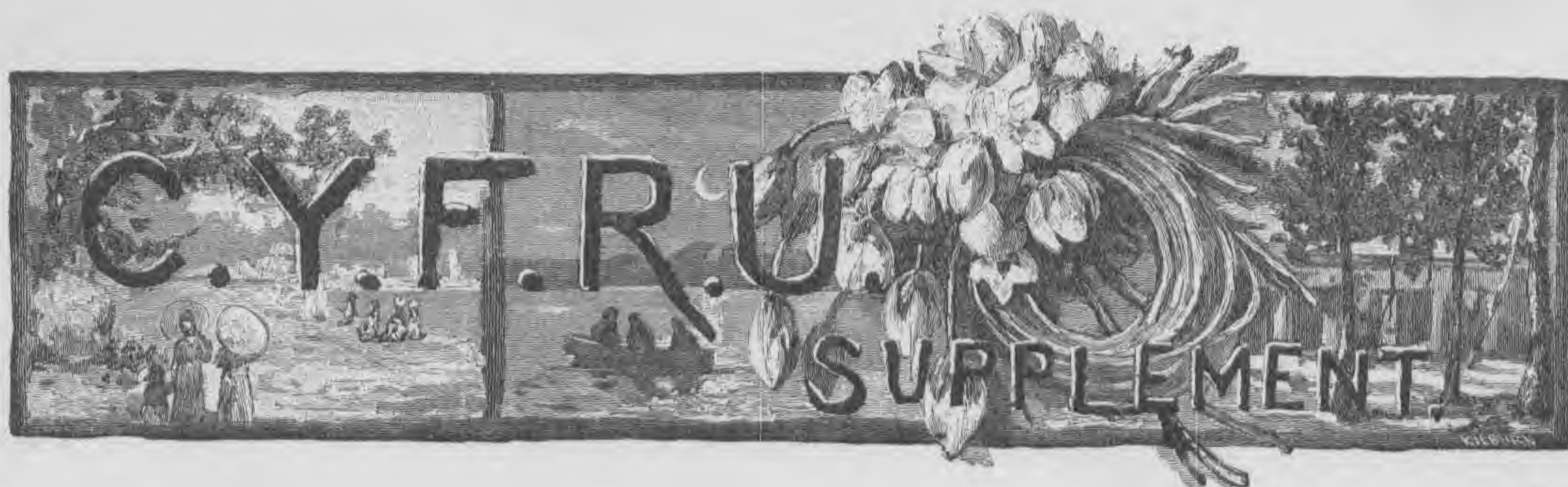
RENA. 1. Please tell me how to take salt from the salt cellar and sprinkle it on meat? Lay the salt spoonful on the rim of the plate, then scatter the salt from the tip of your knife over the food, without striking it on your fork, or making any noise. Avoid all stirring or mixing food as far as possible at the table. Don't lay the salt on the tablecloth, though some persons still follow this habit who are very well bred in other respects; don't strike your knife across your finger to scatter the salt, but use a bit of bread if you can't drop salt from the blade alone.

2. Cake is not taken with either knife or fork, but lifted nicely with the fingers, and should be served in pieces lying lightly apart to be easily reached, not in the form of the loaf. Break cake on your plate, with the back of your knife if you like, but do not cut it up.

C. C. O. "I am secretary of a history club of twenty members, and would like to know strictly what are the duties of president and of secretary." The president in a little society of this kind,

should merely act the part of host or hostess at any evening party, to see that things go off well. He or she mentions the recitations or readings, gets people's attention, and secures quiet when the real business of the evening is to begin. The less formality and the more friendliness with which this can be done, the more grace and credit to the occasion. The whole duty of these society officers is summed up in these words, to see that things go off well. There must be some record kept of things for future reference, and this duty falls to the secretary, who keeps count of the members to see whether any failure of interest is visible. The secretary also reads the papers presented by persons who do not care to read their own, writes and answers all letters on business of the society. The president also studies how to keep up the interest of the meetings by quiet suggestions to individual members outside the regular evenings, by inviting new people, hunting up new topics, in consultation with the secretary. Nothing is better worth the interest of such societies than local history of their own towns and neighborhoods taken systematically. Lists of the first settlers should be correctly made, and their property identified, and the traditions, which cluster in the dullest village, should be gathered and verified. Then every town has its special happenings which deserve to be remembered for the sake of science and general history—like that anniversary ball in winter, at Kenniston, N. H., within ten years, when windows being opened to ventilate the ball-room during supper, the cold precipitated the vapor in flakes, and the dancers returning opened the doors on a white snow storm whirling in the room, while the sky was clear as steel and the air serenely, profoundly cold without, many degrees below zero. Such a happening of a most curious and beautiful fact of scientific interest should be treasured in every detail. Other towns have such wonderful deliverances to tell of as that of the young lady who fell over a cliff thirty feet high, near Ithaca, N. Y., and was buoyed up by her skirts so that she reached the ground in safety. Such things deserve record, and not to be trusted to failing memories and hearsay. How many societies deep in Chaucer or Elizabethan history have yet failed to notice or make any exact observations and account of the wonderful sunsets and sunrises of the winter past! How many have even read the still more wonderful record of the year 1883, memorable for its overwhelming convulsions of nature. Study facts as well as books.

THE WISE BLACKBIRD.



TALES OF THE PATHFINDERS.

BY ARTHUR GILMAN.

VIII.

A TYRANT IN THE DARK.

AN interesting company might have been seen starting out from the town of Boston, one day towards the end of October, in the year 1687. A good opportunity to observe them was afforded as they passed over the "Neck," which at the time was but a narrow strip of land not more than a few yards in width—on their way westward.

The company is partly military and partly composed of civilians. The centre of attraction, as well as of authority, seems to be a man dressed with more elegance than the rest, who appears somewhat haughty in his bearing. There are evidences that he represents, in some way, royal authority. His escort numbers upwards of sixty persons, partly mounted on horseback, a portion of whom are grenadiers, who march proudly along the not very well-made roadway.

Where are these men going? If we follow them, we shall find that after travelling several days they reach the Connecticut river at a point near Wethersfield, and that there, after crossing the ferry, they are met by a troupe of cavalry that escorts them to the town of Hartford. The journey that we can take any morning in a few hours, took these travellers, notwithstanding their appearance of importance and authority, several tedious days. It must have been a mission of no little moment upon which so many persons were bent. We shall have to look over the history of New England a little to learn what it was.

We know already that some of the Pathfinders who began the settlement of America were ruled by France and Spain. The kings of those countries sent out persons to govern the new colonies. This was not the case, however, at Plymouth, to which the "Pilgrim Fathers," as they were

called, came in 1620. They organized a government of their own, and it was the first true democracy that we know of on the continent. The case was different still in Massachusetts, to which John Winthrop came in 1630, bringing a charter from the king (who was Charles the First, you know), giving the people the right to form a government and to make laws. No one seems to understand why Charles the First made so liberal a grant—as it was given at the time that he was determined to rule at home more arbitrarily than usual—unless it was because he thought that if he could lead those who were likely to interfere with his plans to go across the ocean, there would be fewer obstacles to his despotism. Certain it is that a few years later, he repented of what he had done, when he saw that some of his best citizens were sailing for New England and the colony had become strong and promised to be rich.

We have to read the history of England, and sometimes of other parts of Europe, in connection with that of our own country, if we would understand either, and this is an instance of the necessity of understanding the movement of affairs in England. We must know how the king had succeeded in getting all England under his feet: How there was a Star Chamber court to register his arbitrary decrees; how Laud, whom history has execrated, had become the cruel head of the Church, and the efficient supporter of Charles in all his despotism. The story is interesting, if it is distressing. It is the story of the coming on of the strife that resulted in the execution of the king, and the setting of Oliver Cromwell at the head of the government, in whom the Puritans, whom the settlers in New England represented, came to power, and it is not difficult to understand why King Charles wished to stretch his strong arm over New England, when we see how affairs were going at home.

The king and archbishop Laud found themselves too much occupied, however, to carry on a controversy in America, and the charter was not taken away from the people of Massachusetts, though it was in danger for several years. What called off the attention of the king and his helpers from Massachusetts? do you ask? Go with me to the venerable city of Edinburgh, the stronghold of the Presbyterians, and you can see. It is a July afternoon. The people are called to church. They are accustomed to go and sit still, listening to a sound sermon, only moving when there is a hymn to be sung or a prayer to be offered. The service to which they are accustomed was the same that we see in our Congregational and Baptist churches here now, with but little difference.

King Charles the First did not like the simplicity of such a service, and long and strenuously he labored to get the Scotchmen to allow a liturgy to be used — that is to have a service similar to that which you can now see in the Episcopal churches. You know that the people of Scotland are said to be “set in their ways.” They like to go on in the good ways of their fathers, and cannot be turned from them easily. This was one of the traits in their character that King Charles discovered.

As the visitor in Edinburgh walks down the street called High, he is attracted by the figure of a cross formed by the stones of the pavement, and is told that it marks the spot on which stood the “Heart of Midlothian,” as the ancient Tolbooth was called, and just by it rises the massive tower of St. Giles’ cathedral in which the exercises we are to speak of occurred. The hour has arrived for the beginning of the service in which the new liturgy devised by Laud is to be used. The great church is filled with a crowd of angry men and women. The occasion is rendered notable by the attendance of two archbishops, by the chancellor, the magistrates of the city and other officials clad in their robes of authority. The dean begins the detested service, and as his mouth opens to pronounce the words intended to lead the minds of those present to think on holy things, there arise loud cries of “Antichrist!” “Down with the Pope!” “We will none of the mass!” and a woman with daring throws the stool on which she had been sitting at the head of the dean or the bishop. The signal thus given is followed by showers of cudgels and stones. The persistent ministers do not retreat, but the bishop who tries to preach, is not heard for the clamor, and the magistrates are unable to restore quiet. The crowd outside shout too, and break in the windows, and when the prelates leave the building, it is at the risk of their lives. Such was the spirit of some of the people at home against whom King Charles had to struggle. Was it strange that he did not find it convenient to add to his

burdens an active campaign against the colonists of Massachusetts?

Time passed on, and at last Charles the Second came to the throne. He was not slow in beginning an inquiry into the condition of affairs in Massachusetts, nor in determining to restrict the independent spirit of the colonists. He confirmed the charter it is true in 1662, two years after his accession, but he did it in a way that made him very offensive to the people. He demanded, among other things, that those who wished, might worship after the manner of the English Church, with the liturgy, which was not very different from that which had so much stirred up the people of Edinburgh. This was very distasteful, and a struggle began that lasted a quarter of a century. It is not my purpose to follow it in all its intricacies. The people of Massachusetts were firm. At the beginning of the struggle, they said, “Let our government live; our patent live; our religious enjoyments live; so shall we all yet have farther cause to say from our hearts, Let the King live forever!” At the end of 1683, their deputies said “Better suffer than sin!” and determined still to hold out.

Finally, the king triumphed and a governor was sent out to take up the work of crushing the proud spirit of the people of Massachusetts and Connecticut. In the meantime, however, King Charles the Second had succumbed to King Death, and it was his brother, James the Second, who took up the unpleasant task. The new king was proclaimed in Boston in May, 1685, with great pomp. The governor, and other officials marched through the streets on horseback accompanied by cavalry and infantry, and thousands of citizens, with drums and trumpets added to the loud huzzas of the populace, and there was firing of the guns of all the soldiery as well as of ordnance. A temporary government was established, and one Sunday just before Christmas, 1686, Sir Edmund Andros arrived with a commission as governor of all New England, the boundaries of which were afterwards so enlarged as to include the present limits of the State of New York. By this movement the struggle that had lasted a quarter of a century resulted in the defeat of the people. Sir Edmund Andros was the tyrant who got into the dark, and I shall show you that he got into a worse trouble before he was able to return to England.

You will read in history that the king issued a “*quo warranto*,” before he took away the charter of Massachusetts; that is, he asked by what warrant the charter was held. When he was told that it was granted by the king his father, he was able to reply, “What the king has granted he has power to take away.” The king claimed that he was sole authority over the portions of America settled by the English, because it was an English-

man, the navigator Cabot, who discovered the region. After the charter was given up, Andros claimed that all title to the land had returned to the king, so that no man had a right to any homestead or other property of the kind without getting it anew of the king, or of him, as the king's representative. This gave him an opportunity to draw large sums of money from the citizens for estates that they had already paid for, and it was this and other like oppression that caused them to call Andros a tyrant, and to feel hatred for him.

After he had fairly inaugurated his government in Boston, Andros determined to go to Connecticut and force the people there to give up their charter, for he had failed to induce them to do it by sending messengers and letters to them. It was after coming to this determination that he sat out on the journey referred to at the beginning of this paper. The governor and assistants of Connecticut "greeted and caressed" him at Hartford, and in the evening met to have some discussion regarding the object of the expedition.

It is often difficult to learn the real truth about a transaction that involved its perpetrators in danger, and it is not easy to find out exactly what occurred at this meeting, but tradition tells us that there were many present at the conference, and that the charter was laid upon the table while the discussion went on. The room may have been brilliantly lighted, but it was by means of candles, and of a sudden they all went out! Then the tyrant was in the dark! It was no easy matter to light a candle in those days. There were no matches, and one was obliged to go to a fire for a coal, or to strike a light with a flint, which might miss fire time and again. Probably a light was found without much delay at this important juncture, but when the company was able to look about the room again, lo, the charter was missing! No one seemed to know where it had gone, but it was said afterwards that one of the company had taken it and hidden it in a hollow oak hard by. Certain it is that this man was rewarded long afterwards for having done a deed of faithful service at a time when the "constitution was struck at," and the tree was ever after called the Charter Oak.

It seems to have made but little difference to Sir Edmund that the charter was gone. He took possession of Connecticut, and it was duly written in the records that by direction of James the Second, His Excellency Sir Edmund Andros took the government into his hands, which was annexed to Massachusetts and other colonies, and the word "Finis" was written after the entry, to indicate that Connecticut had come to an end as a separate State. The historian of New England says that

then it was all "consolidated under one despotism."

I imagine the governor returning to Boston with a face beaming with satisfaction as he thought that he had successfully accomplished the dirty work that his mean master had set him to do; but if he felt satisfaction, it was not to remain with him long, for as I have told you, his getting into the dark was not the worst of his troubles. He went on in his high-handed proceedings, and the feelings of the people grew more and more intense against him as he did so. In the meantime, Englishmen at home were growing discontented with the king himself, and finally he thought it best to run away. On the eleventh of December, 1688, he stole out of his palace secretly, crossed the Thames in a small boat, threw the great seal of the kingdom into the muddy river and hurried off. King James did this because his people, aggravated beyond endurance, had called William, Prince of Orange, and his wife, Mary, daughter of James, to come and rule over them, and the Prince had actually arrived in November.

It was the fourth of April of the next year before the people of Boston had any news of what was going on at home. Then a ship came into their harbor bringing a young man who had a copy of the proclamation issued by the Prince of Orange. Andros heard of it, and did not wish the people to know it. He sent a messenger to bring the young man to his house. He refused to go, and was for his boldness marched off to prison. This excited the people, and Andros found it safer to get himself to the fort, where he thought he could escape to the British ship *Rose* that was lying in the harbor. Two weeks later, came election day, and State street (then called King street), was crowded with excited men. By coming together and talking over their troubles they became more excited, until at last they planted troops before the Fort, called upon Andros to surrender, and forced him to give up. He tried to escape in the clothes of a woman, but he was caught and marched back to prison. Then he had time to meditate on the things he had done for his master. Two weeks more passed, and a vessel brought the glad news that William of Orange was actually king of England instead of James. Then the good people of Boston sat down to a fine dinner in the Town House, and did not rise from the table until the watchman had tolled the hour of nine, when all honest Bostonians were expected to be at their homes. Thus the tyrant Andros went from oppression into the dark, and from dark to prison, and the people of New England fluctuated from one degree of exasperation to another and then experienced a rebound as they forgot their pains in the festal gathering.

IN CASE OF ACCIDENT.

BY DR. D. A. SARGENT.

VIII.

THE HEART.

THE heart is a hollow muscular organ about the size of the closed fist. It is situated on the left side of the chest, just above the stomach, and is immediately connected with the lungs. The heart is divided into halves, and each half into an upper and lower chamber. The right and left sides of the heart are separated by a partition through which there is no opening; but the two chambers on either side are connected by passages, which are opened and closed by valves.

Leading from each side of the heart are two or more tubes which gradually increase in number, and diminish in size, until they form a complete meshwork; this meshwork extends to every part of the body.

The object of these tubes is to conduct the blood throughout the system. The blood is sent from the *left* side of the heart through these tubes to the body, and is returned to the *right* side of the heart, whence it is sent to the lungs, and then to the left side of the heart, etc.

This process is termed the *circulation*.

The force which propels the blood on its way around the body lies largely in the contractile power of the muscles of the heart. The heart in this respect acts very much like a pump. Every contraction of its muscular walls sends the blood onward and conveys to every tissue the elements of life. The impulse which the blood receives from the heart's contraction may be felt at the wrist, arm, and neck, and other parts of the body. Anything that tends to impair the action of the heart, tends to retard the circulation of the blood, while on the other hand anything that invigorates the beating of the heart tends to increase the circulation.

The presence of a full supply of blood to a part is so intimately connected with its health and life that any disturbance of the circulation should be promptly met and remedied. A checking of the usual flow of blood to the hands, or feet, may not occasion any alarming symptom aside from a feeling of numbness.

But if the flow of blood to the brain and nerve centres is diminished — which often happens — then faintness and loss of consciousness is likely to follow.

FAINTING.

Many accidents not otherwise serious in their nature often give rise to fainting-fits, which unless properly treated may occasion death.

A habit of fainting may be formed, even when there is no aggravating cause for it. But persons who have a tendency to faint at the slightest provocation, are usually troubled with nervous debility, weakness of the heart, or else their system is impoverished for want of a sufficient supply of blood.

The causes which are most likely to occasion fainting in any person whether susceptible or not, are loss of blood from wounds, or internal injuries, blows over the stomach or chest, a sudden shock to the nervous system from severe fright, or startling news, violent emotional disturbance, drinking iced water or bathing in cold water after being much heated and fatigued, want of food, and fresh air, general weakness etc. Sometimes a feeling of faintness may be occasioned by taking several deep inspirations while in a standing posture. By so doing an unusual amount of blood is suddenly drawn from the brain to the heart and lungs, thus leaving the seat of consciousness poorly supplied with the vital fluid.

The first symptom of fainting depends a good deal upon the immediate cause. A feeling of sickness at the stomach, coldness of the body and extremities, accompanied by dizziness, are perhaps the most common. If a faint is anticipated, it can often be prevented by bending forward and dropping the head between the legs, or if the opportunity presents itself, by lying at full length in the horizontal position. If a fainting person is left to himself he generally falls to the ground or floor, and soon recovers unless the cause is a serious one.

TREATMENT OF FAINTING.

This suggests the remedy in most cases: *Put the person in a horizontal position* as quickly and gently as possible.

Do not attempt to support the body in an upright position and hold up the head, by so doing you make it harder for the heart to send the blood to the brain, and thus aggravate the immediate cause of faintness. If a person is seated in a chair at the time, tip it backward, if you are strong enough to support the weight, and let the back of the chair and head of the person gently down to the floor. The elevated position of the feet and

legs under such circumstances might favor the recovery.

If the horizontal position does not bring relief, open the windows, or take the person into the fresh air, loosen the clothes about the neck and chest, and sprinkle the face with cold water.

A bottle of smelling salts held under the nose for a few seconds at a time, will sometimes stimulate the respiratory function. This remedy, however, should be applied cautiously. Care should be taken to keep persons from crowding around one who has fainted. Fresh air under such conditions greatly favors recovery.

If the attack is much prolonged, and the person does not return to consciousness under the treatment advised, a physician should be sent for.

Be careful to put the person in a reclining position and to use salts only when the face of the patient is pale. If the face is red, or flushed, avoid ammonia and keep the head in an upright position.

Instead of an ordinary fainting fit, it is very likely that you have a case of shock to deal with.

SHOCK.

A mild shock resembles fainting very much, but is a more serious affair. A shock is generally occasioned by some sudden and severe injury such as might be received in a railroad accident, steam boiler explosion, or by a stroke of lightning.

Death is not infrequently caused by shock, where there is no evidence of any injury.

In case of fainting the state of unconsciousness is generally due to depression of the heart's action, whereas in shock this effect may be compounded with interruption of brain and nerve functions.

Sometimes in shock the heart is most affected, sometimes the brain. If the function of the heart is interfered with, the pulse, and respiration will be imperceptible. If the brain and nervous system is chiefly disturbed, the person will remain in-

sensible, even though the heart is performing its function all right.

The appearance of a person suffering from shock is quite characteristic. Utter prostration, face and lips pale and bloodless, the skin cold and moist, the eyes half closed with no lustre, the pulse feeble, if perceptible, and the respiration sighing and imperfect.

The mind is bewildered, the speech is incoherent, and sometimes complete unconsciousness and insensibility occur.

TREATMENT OF SHOCK.

The first thing necessary is to excite the heart and brain to healthy activity. Place the patient in the recumbent position, so as to facilitate the heart's action, then loosen the clothes around the neck and body.

Stimulants are the remedies next required. Hot brandy and water, mixed half and half, and given in teaspoonful doses every minute, until five to ten have been taken, is the most efficacious stimulant. The aromatic spirit of ammonia is sometimes given for the same purpose. The dose is from ten to twenty drops in a teaspoonful of water.

The external application of heat is very desirable. This may be applied to the feet, pit of the stomach, under the arms, and between the legs. The best way is by means of flannels wrung out in hot water, by heated bricks or stones wrapped in flannel, by jugs or rubber bags filled with hot water, and by heated sand bags. As soon as warmth to the body, and the circulation has been restored, nourishment in the form of beef-tea may be given in small quantities with benefit. If there is a tendency to nausea, this may be allayed by giving the patient a piece of ice in the mouth, or by a two-grain dose of opium. The injuries which occasioned the shock, and the treatment after the emergency is over, better be left to a physician.

LITTLE BIOGRAPHIES.—HOW SUCCESS IS WON.

BY SARAH K. BOLTON.

VIII.

ELIAS HOWE, JR.

THE inventors of the world have been, with rare exceptions, very poor men. The stories of Palissy, the Potter, of Stephenson, the Father of Railways, of Goodyear, and of Elias Howe, are as pitiful as they are inspiring. History

scarcely furnishes a more pathetic picture than that of Bernard Palissy of France, working sixteen years to discover how to enamel pottery; his furnaces for burning his earthen ware were built with brick carried upon his back, because he was too poor to hire a horse to draw them; the floors of his house were torn up for fuel; the doors even taken off their hinges, and used to shut out the driving storm from his workshop; his six children

died primarily from starvation it is believed; his wife, in rags, was in despair over her husband's folly; Palissy himself was worn to a skeleton by privation, and he gave his clothes to his assistant because he was unable to pay him in money; he was despised by his neighbors for what they considered his suicidal obstinacy; he was always hoping, but always failing. At last success came. He did discover the secret of one of the great industries of the world. Then he was made "Bernard of the Tuileries," he received the patronage of kings and emperors, he wrote books, he opened a school of philosophy, and he was honored by the disciples of art and science everywhere. Had he



ELIAS HOWE, JR.

been living in ease and luxury, he would perhaps have never made those long, weary efforts; but in his poverty, he was ever saying to himself: "If I find out the secrets of pottery, my wife and children will live in plenty. Now it is starvation—by and by, it shall be wealth and fame."

George Stephenson, unable to read the alphabet till he was eighteen, working in the coal pits for six pence a day, and mending the boots and patching the clothes of his fellow workmen in the evenings to earn a few extra pennies that he might attend a night school, is another good illustration of what a poor and ignorant boy may become. Never idle, never above doing the commonest

work, never an ale drinker, as was the custom among miners, he showed the fine quality of his nature by giving the first money which he ever earned, one hundred and fifty dollars, to his blind father, that he might pay his debts.

When he became an engineer, and projected a railroad between Manchester and Liverpool, the people said, "He is a madman! His 'roaring steam engine' will set the houses on fire with its sparks, the smoke will pollute the air, and carriage-makers and coachmen will starve for want of work." The excitement following his public proposals was intense. For three days he was questioned by a large committee of the House of Commons. This was one of the questions: "If a cow gets on the track in the way of an engine travelling ten miles an hour, will it not be an awkward situation?"

Very soberly answered George Stephenson, but with a twinkle in his eye: "Yes, varry awkward indeed for the coo!"

One Government Inspector said that if a locomotive ever went ten miles an hour, he "would undertake to eat a stewed engine wheel for his breakfast." Stephenson's "Rocket," a clumsy engine, but a wonder at the time, and now to be seen at the Kensington museum, made the trial trip at an average speed of fourteen miles an hour, and so the Inspector had the opportunity of keeping his promise. During the next ten years, being employed to open up railroads in every direction, Stephenson became wealthy and renowned, the friend of Sir Robert Peel, the owner of a large country seat, and the pride of England. He declined the honor of knighthood. His famous son Robert said of him, "His example and his character made me the man I am."

Charles Goodyear, of New Haven, Conn., for eleven years struggling to make India rubber of practical use, imprisoned for debt, pawning his clothes and his wife's trinkets, his children gathering sticks in the fields when he was no longer able to buy wood for fires to melt his rubber, often with neither food nor fire in the house, once with a child dead and no means to bury it, and five others nearly starving—this great inventor furnishes another instance of heroic struggle. He was derided by his friends; one would say to another: "If you see a man with an India rubber cap, an India rubber coat, India rubber shoes, and an India rubber purse in his pocket, with not a cent in it—that is Charles Goodyear!" But these same friends lived to see his vulcanized rubber applied to five hundred uses, to see sixty thousand persons annually producing eight million dollars worth of merchandise from it. It surely shall be counted no mean part of a great success that the daily welfare of thousands of people is involved and provided for—that daily work and daily wages are secured for multitudes.

Elias Howe's life, like the others, is the old fairy

story of poverty and toil, ending with the grandest success. In the town of Spencer, Mass., in 1825, a boy six years old, somewhat lame, might have been seen any day working with several little brothers and sisters at sticking wire teeth into leather, to make cards for combing cotton. The father was a miller by trade, but from sawing boards, or grinding corn, there came scarcely enough to support a wife and eight children. It followed presently that somebody must go out from the big family and earn food for himself; therefore at the age of eleven, the cheerful, good-tempered Elias was sent to a farmer's to "live out" till he was twenty-one.

For a year he worked steadily; but naturally weak in body, the hard labor proved too severe, and he went back to his father's mill. At twelve years old, most boys are in school, with little knowledge or thought of how some other little fellows work from morning till night, with no opportunity for either study or play.

Elias was, as you see, one of these unfortunate "other little fellows," but he was ambitious, and having heard of Lowell and its mills, at sixteen he obtained the consent of his parents to go there. It was a risk; he might make a permanent and profitable place for himself, or he might be wrecked by the bad habits of many about him. However, the boy who could not at sixteen say "no," when asked to drink, or go into other sins, probably would not have the backbone to say "no" at twenty-one. For two years he labored faithfully; then the mill closed, and he was obliged to go elsewhere. Under the shadow of Harvard University, he found another situation in the machine shop where was employed his cousin, afterward Major-General N. P. Banks, and they both boarded in the same house. At twenty-one we find young Howe with an inventor in Cornhill, Boston, earning the munificent sum of nine dollars a week. This would have provided a fair support for one person, but as he had married, and soon had three little children to feed and clothe, life of course became again a struggle for bread. In poor health, he was now so often very weary, that he said "he longed to lie in bed forever and ever."

Liking machinery and curious about inventions, he was always asking himself if he could not "think out something" which would give more money to his family. At last, as his wife sewed, he fell to wondering why some machine could not be made to take fifty stitches while she was taking one. This idea presently took possession of him. For months he pondered over it. He experimented in a simple way, with a needle pointed at both ends and eye in the middle, and finally, by a rough model of wood and wires, he convinced himself that a sewing machine was a possibility.

But how was the money needed for the construction of a machine, to be obtained? Nine dollars

a week left no surplus for such a purpose. Possibly he might earn more if working in a shop of his own, he thought; so he moved his lathe and a few tools into his father's garret in Cambridge. Day after day he thought over his invention, but nothing came of it. But it is a long road which never turns, and by and by the way seemed open to succeed. He found an old schoolmate George Fisher, who believed in him and his invention, and who took him and his family to his own home, gave him a small garret for a workshop, and five hundred dollars with which to experiment. This was a foothold indeed for the young mechanic. Satisfied that his family would have enough to eat for a time at least, he threw off care and set himself diligently at work on his machine, and in six months had completed one; it was only about one foot and a half long, and equally high; but to his great delight it would actually sew seams.

Now he had visions of luxury for his wife and babies. For of course, the world would eagerly purchase a thing so valuable in saving labor and time. He took it at once to Boston, and the tailors all looked at it; but nobody would buy. Indeed they probably felt like breaking it in pieces, as the miners did Watt's engine. They saw the curious wizard thing that would take their sewing out of their hands, and therefore they resolutely opposed it. Besides the machine would cost five hundred dollars, and few were able to pay that sum if they so desired. By the help of Mr. Fisher the machine was patented in Washington; but the months went slowly by, and there was no purchaser.

Want stared Elias Howe in the face, and he felt that he must go back again, for the sake of his family, to daily work. Through a relative he became engineer on one of the roads leading out of Boston, but his ill health forced him to abandon it. Out of work, owing George Fisher nearly two thousand dollars, with little prospect of ever paying it, he moved his family back into his father's house in Cambridge.

He did not however lose his hope, for he believed that if America did not care for his invention, England would see the value of it. His brother Amasa therefore took passage in the steerage of a sailing vessel, carrying the precious, but apparently profitless machine to London. There William Thomas, of Cheapside, with possibly some previous knowledge of Yankee shrewdness, caught the idea of the inventor, and was much sharper than a Yankee in making a bargain. He bought the machine for twelve hundred and fifty dollars, with the right to make and use as many others as he chose; and he offered the inventor fifteen dollars a week if he would come across the ocean to operate it.

After four months Amasa returned. The money he brought was soon used in paying debts, and as nothing else opened in the way of work, the brothers started again in the steerage, cooking their

own provisions. It was a cheerless journey, but it is, as we have seen repeatedly, grim necessity that forces men to heroic effort. For eight months Elias worked for Mr. Thomas, and he sent for his family; but after the machine was in good working order, the inventor evidently was not wanted longer. And now what should he do in a strange country? He borrowed a few tools and tried to make another machine, but this did not secure daily bread. He pawned his clothes, raised a little money, and again sent his family back to his father's house in Cambridge.

Now alone, and penniless, he borrowed money to pay for his scanty food—often beans—which he cooked in his shop—and toiled on. A man less brave than Elias Howe would probably have drowned himself in the Thames, or attempted to drown his sorrows in drink, but he still believed in the great utility, in the great public benefit of his invention, though the world, as ever, thought him an idiot, a crazed dreamer, for his pains. With no work, no friend to lend him any more money, he sold the machine which he had spent four months in making for twenty-five dollars, pawned another, drew his baggage in a hand-cart to an out-going vessel, found a place as cook in the steerage, and set his face toward America.

His hopes had not been realized abroad. He had come back in utter penury, but he was thankful that he should see the dear ones whom he loved. What was his amazement, his grief, when he landed in New York, to hear that his wife, worn with the privations incident to being the companion of an inventor, was dying of consumption. He had but sixty-two cents in the world, and could not possibly go to Cambridge. At once he sought employment in a machine shop, hoping in a few days to earn enough to take him to her bedside, but fortunately he received ten dollars from his father, hastened to her, and received her dying words of love and encouragement.

Borrowing a suit of clothes to attend the funeral, for his own were too shabby, for the first time the hapless inventor looked and felt discouraged and desolate. With his wife's companionship and cheer, fragile though she was, he had ever been strong, and he had always believed that he should earn enough to make her comfortable, nay, to surround her with luxury and beauty! To render his circumstances still worse, the ship in which were stored all his household goods, had gone to the bottom off Cape Cod. Perhaps now his visions of success vanished; certain it is that he at once went back into a shop at weekly wages—his friends thought him a "sadder, yet a wiser man."

Meantime other men in America had been reading about Howe's invention, and they were thinking out and working out similar projects. One man in New York State exhibited a "Yankee Sewing Machine" as a curiosity, at twelve and a half cents

admission. Ladies came eagerly and carried home pieces of the work, as a marvel. Elias Howe read of this. He knew that all this success belonged to him; but how could he begin a suit for his rights, with his only machine in pawn across the seas? Again and again he begged men to take up the matter, striving to convince them that they would make money for themselves, eventually; but those who believed in him, were without funds, and those who had funds were unwilling to risk their money in so novel an uncertainty. At last one person was found who promised to coöperate provided that Howe's father would mortgage his farm to him for security. This Elias himself felt was a great risk in behalf of an invention which had thus far brought only disappointment to its originator. But the father consented, and for four years the weary lawsuits dragged along.

The most important was with Isaac Singer, an actor, who having seen Howe's machine, determined to make one, and in eleven days, working twenty-one hours out of the twenty-four, had succeeded. At once, with great energy, he had advertised, and had begun to send out agents. The real inventor now notified him that he was infringing, and by and by, too, the courts decided in Howe's favor.

It was now nine years since the first machine was made; nine years of exceeding bitterness and of hope deferred. He was thirty-five when the long looked-for day of success dawned. Many machines were made, and sold both here and abroad, and Elias Howe's income soon increased, and swelled to the large sum of two hundred thousand dollars yearly! The mechanic was no longer cook in the steerage, no longer subsisting upon a few beans, cooked and eaten in his dingy workshop. In thirteen years he had received two million dollars from this, the thought of his own brain. He was recognized as a benefactor to labor, to commerce, and to women in every station in life.

When the civil war began, Mr. Howe was ready to leave his prosperous business and help save the Union. Did he enter the war as an officer? No; the millionaire considered himself no better than any other true-hearted private. The following incident shows well his character:

At the moment when Mr. Howe avowed his determination to enlist, his coachman had entered the building to witness the proceedings. He was a warm-hearted Irishman, named Michael Cahill, past the age of military service as determined by law. Upon hearing his employer's speech, he rushed forward, and clambering upon the platform, he cried out: "Put my name down too. I can't bear to have the old man go alone." So down went the name of Michael Cahill, coachman, next to that of Elias Howe. Laughter and cheers mingled in about equal proportions. For four months after the Seventeenth Connecticut entered the field, the Government was so pressed for money, that no payments to the troops could be made. One day a private soldier came quietly to the paymaster's office in Washington, and as there were several officers there to be attended to, he took a seat in the corner to await his turn. When the officers had been disposed

of, Colonel Walker turned to him and said: "Now, my man, what can I do for you?"

"I have called to see about the payment of the Seventeenth Connecticut."

The paymaster, a little irritated, told him bluntly "that a paymaster could do nothing without money, and that until the Government could furnish some it was useless for soldiers to come bothering him about the pay of their regiments."

"I know," said the soldier, "the Government is in straits, and I have called to find out how much money it will take to give my regiment two months' pay, and if you will tell me, I am ready to furnish the amount."

The officer started with astonishment, and asked the name of the soldier, who was no other than Elias Howe. On referring to his books, Colonel Walker found that the sum required was thirty-one thousand dollars. Upon receiving the information, the private wrote a draft for the sum and received in return a memorandum, certifying the advance, and promising reimbursement when the Government could furnish the money. A few days after, at Fairfax Court House, the regiment was paid. When Mr. Howe's name was called, he went up to the paymaster's desk, receiving twenty-eight dollars and sixty cents of his own money, and signed the receipt therefor, "Private Elias Howe Jr." After rendering all the services a man in his physical condition could render, he reluctantly asked a discharge and returned home. He used to say to the soldiers:

"I have got to leave you, boys. I'm of no use here; but never mind; when your time is out come to me at Bridgeport; I'm building a large sewing machine factory there, and I shall have plenty of work for those that want it."

Many of his comrades took him at his word, and until his death were at work under him in various capacities.

Three years after the war closed, in 1867, Mr. Howe received a gold medal for his sewing machine at the Paris Exposition, and the Cross of the Legion

of Honor; a personal distinction to a great inventor. What was there left for him to ask? He had wealth, he had honors. He had overcome ill health, poverty, and the schemes of men to rob him of his inventions. He had held steadily to one purpose in life, and through all he had been uniformly just, kind, and never had he been in an ill temper at the indifference of the world. That man only has learned to live rightly, who takes with a smile the world's praise or blame, and with steady head and hand goes straight on with the work he has in hand.

In one sense, his was a completed life; and that same autumn in which he received the Cross of the Legion of Honor, he took cold, and was soon quite ill. Still in early middle life, only forty-eight, his friends felt that he must recover; but one Thursday afternoon, October 3, as the sun was setting he sank peacefully away.

The sewing machine companies of the country passed resolutions of sorrow and respect for "an inventor of genius and ability, a business man of industry and integrity, a benevolent and kind-hearted friend, and a citizen of liberality and patriotism."

Such a life as that of Elias Howe is surely full of encouragement to those who, lacking money and education, are yet determined to make the most of themselves, who are determined to be true to the ideas they believe in; it is by these plucky men the race is helped forward to its great achievements.

WAYS TO DO THINGS.

By F. T. VANCE.

XXII.

SOME COMICAL KITES.

UNCLE GEORGE, I wish you could come out in the shop and show Willie and me how to make that kite you were telling about last winter."

It was a very kindly and venerable old gentleman that was thus addressed by his nephew, a lad about fifteen years of age.



FIG. 1. FRAME.

"Well," said uncle George, "I am busy now but Saturday morning I will try to be on hand, and I would like you to have all ready for me at least a dozen nice, clean barrel hoops, as straight grained as possible; and ask your mother

to make a pan of flour paste, and give you a bundle of old rags, for there is little better to make a

really fine-looking kite-tail than rags of any kind." With this uncle George went off to his office where he seemed to be always writing learned books.

Saturday morning, when uncle George appeared in the shop, he found awaiting him not only his two nephews, but a great pan of smoking hot flour paste, also a large bundle of all kinds of rags, a pair of shears, a sash brush, a ball of twine and a package of old newspapers; but what most attracted his attention was the enormous pile of barrel hoops.

"I am glad to see so many good hoops," said he, "but we will have no use for those made of split saplings, because the bark on them would be difficult to cut, and they are heavier than those made of clear wood, while they don't materially increase the hoop in strength." Hereupon he took



FIG. 2. LAUGHING BOY.

from under his arm a large roll of something, as well as a package from his coat pocket, and laid both on the table.

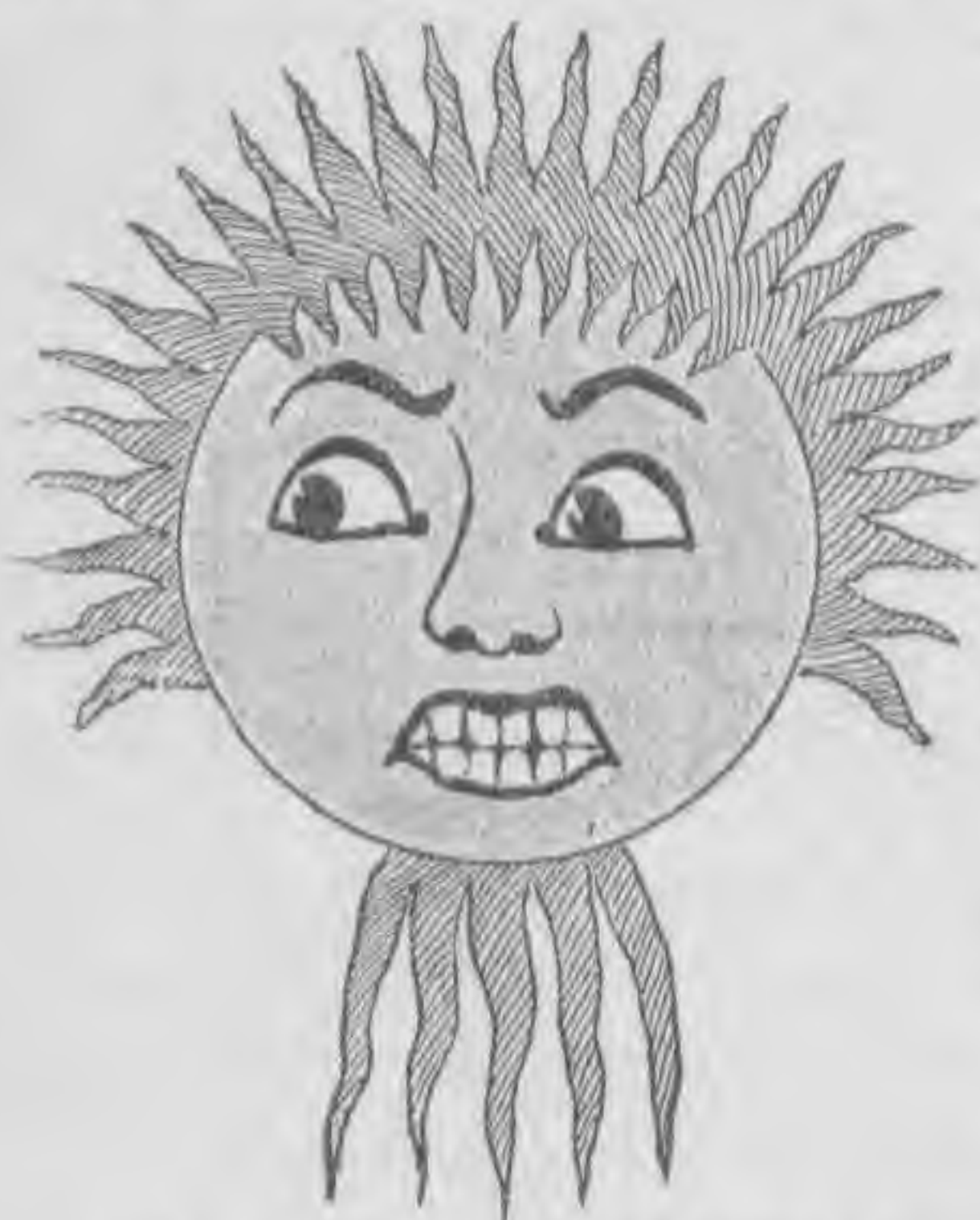


FIG. 3. WILD MAN KITE, a.

That done, you see I take two or three tacks and drive them directly through the hoop; then I give each one a tap on the point to rivet it."

Next he opened the package he had taken from his pocket and took from it some copper wire, which he wound around the hoop on one side two or three times, and then stretched it directly across the hoop and cut it off, being careful to leave it long enough to twist around and fasten. Then he ran another piece in the same way across the hoop at right angles with the first wire. "This," said he, "will strengthen the hoop and support the paper against any strain it may encounter in the wind." (Fig. 1.)

Next he opened the long roll. "I think a sheet of this pink tissue paper is appropriate for this kite, which I call 'Laughing Boy.' I will first mark out the size of the hoop upon it and then cut the paper about an inch larger all around; this will give me plenty of

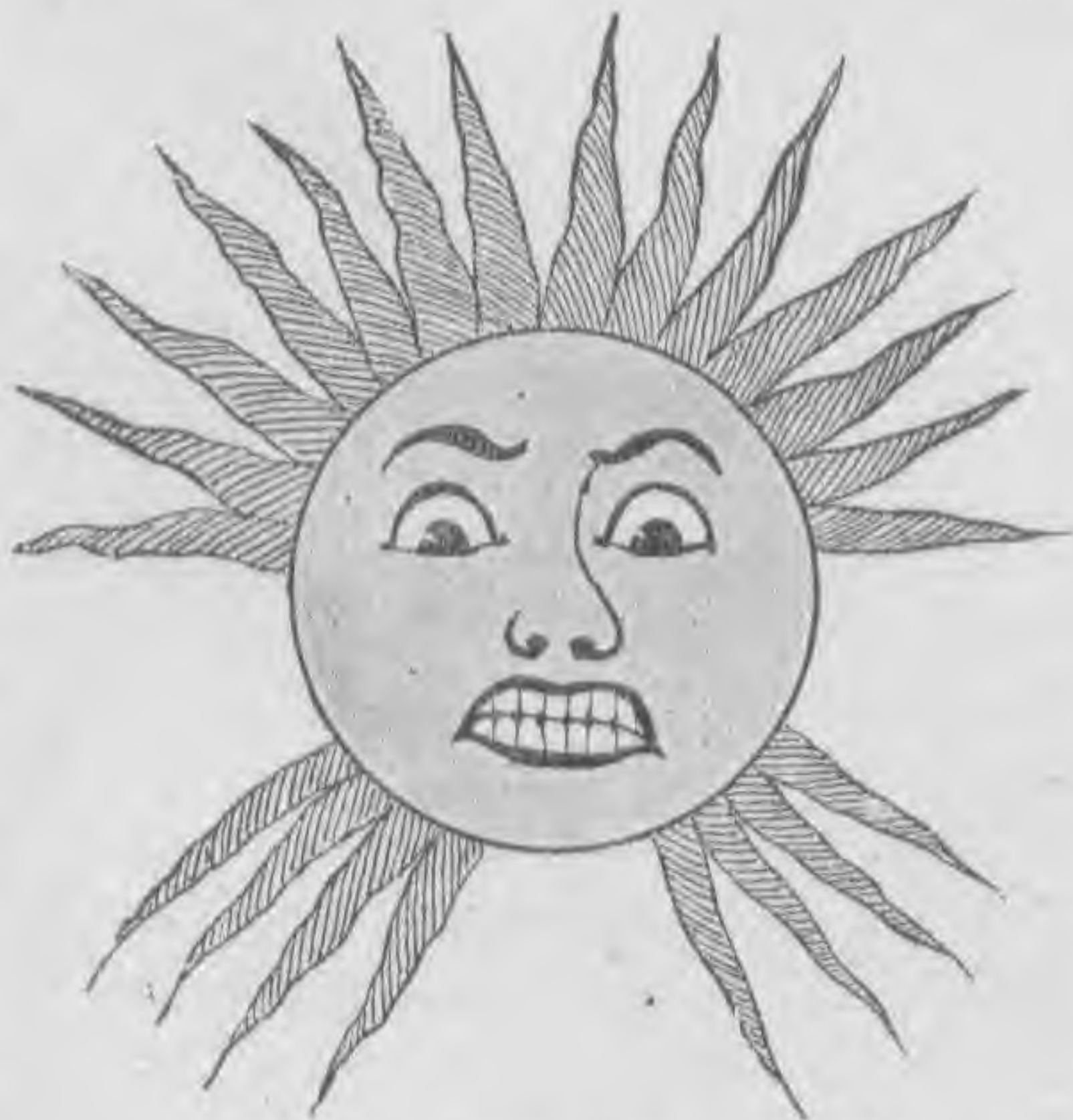


FIG. 4. WILD MAN KITE, b.

room to fold and paste over the hoop; and now that it is done, you can see the barrel hoop already resembles a kite. Now I might use some black ink, with a camel's hair pencil to make the different markings that I mean to put on this blank rosy face, but we would find that both ink and water-colors are too transparent to be of any value in the distance—so I will cut out of this dark, opaque brown paper eyes, nose, and

mouth; and I also cut out of white tissue paper the eye-balls and a good set of teeth for the laughing mouth (fig. 2). Of course it is necessary to cut away the pink immediately under where the white will come. If you would like to have your kite look like a wild man (fig. 3), you can do it in this manner: take three or four of your newspapers and cut them into zigzag strips, without being careful as to regularity, only leaving as a heading to your fringe a strip that is about the width of the hoop for the purpose of pasting on the kite. This

furnishes him hair and whiskers, and you can give him a funny goatee by cutting the zigzags longer. You see that he now looks quite wild." (Fig 4).

"And what do you think is the best way to make kite tails?" asked Willie.

"Well," answered uncle George, "if you can get some good strips of woollen listing, from a tailor's shop, you can make one out of that, and

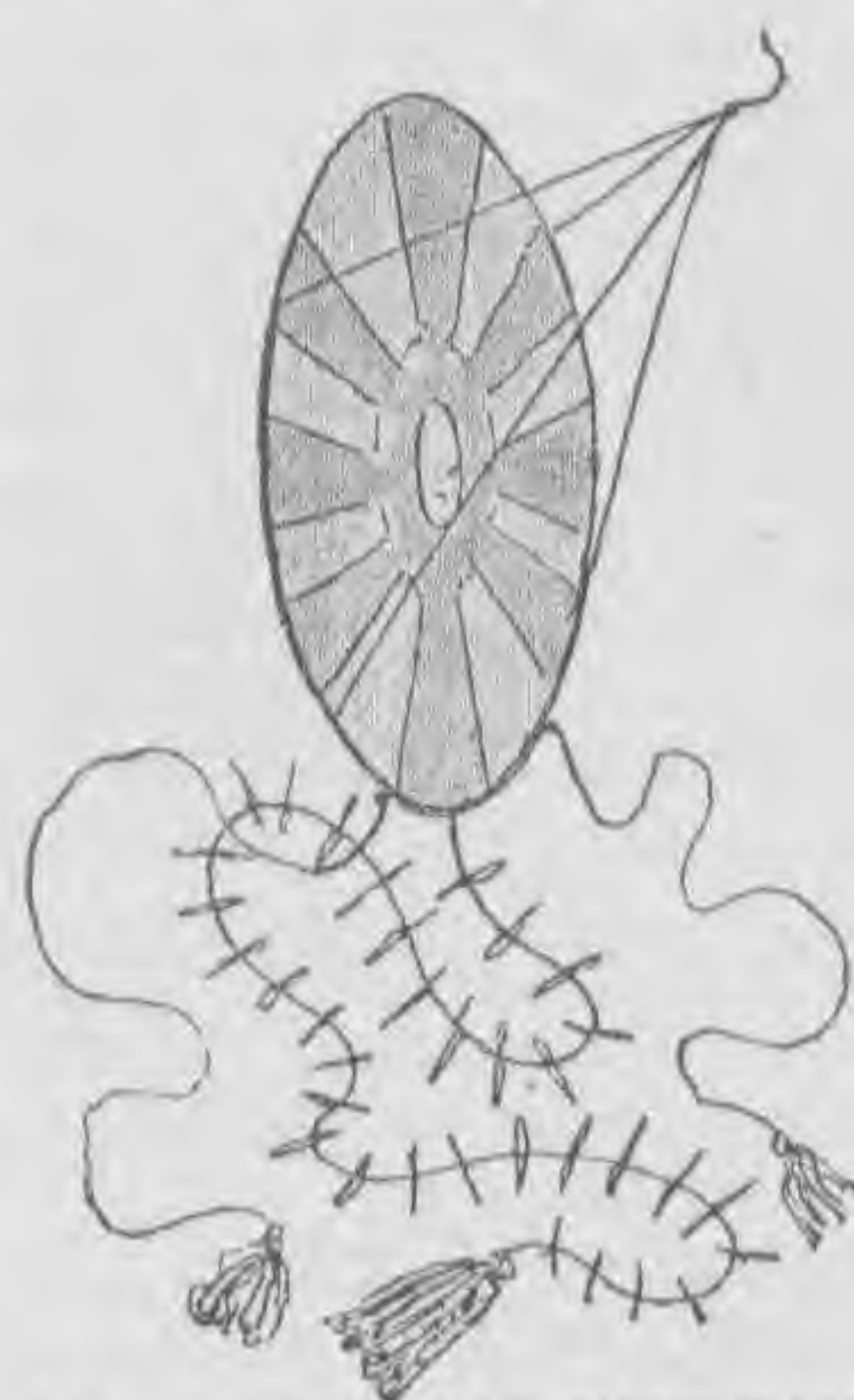


FIG. 5. LISTING KITE-TAILS.

you can tie on the end a tassel formed of extra pieces, and if you find it too heavy, it is easy to take out listing enough to leave the kite perfectly balanced. But as I have only two short pieces of listing I will put them both on the same kite adding thereto a longer tail in the middle for oddity (fig. 5). Now I will leave you to practice in making up three or four plain kites out of these hoops and this pink and yellow tissue paper.

After dinner uncle George found that the boys had made no less than eight or ten kites, very neat ones too. They were so very good indeed that he at once set about giving them instructions as to "hanging the kite"—a very important point.

"The best way," said he, "to hang these hoop-kites is to turn the kite face down; then with a lead pencil make four plain marks on the hoop, each about midway between where the wires are tied. I then carefully stick my lead pencil through the tissue paper at these points, and turn the kite face up. Now I measure across the kite for the upper hanging string; and I add to that almost one half more for the lower hanging string; and then fasten the two strings together exactly in the middle; afterwards I tie the two shorter ends, one in each of the upper holes and the longer

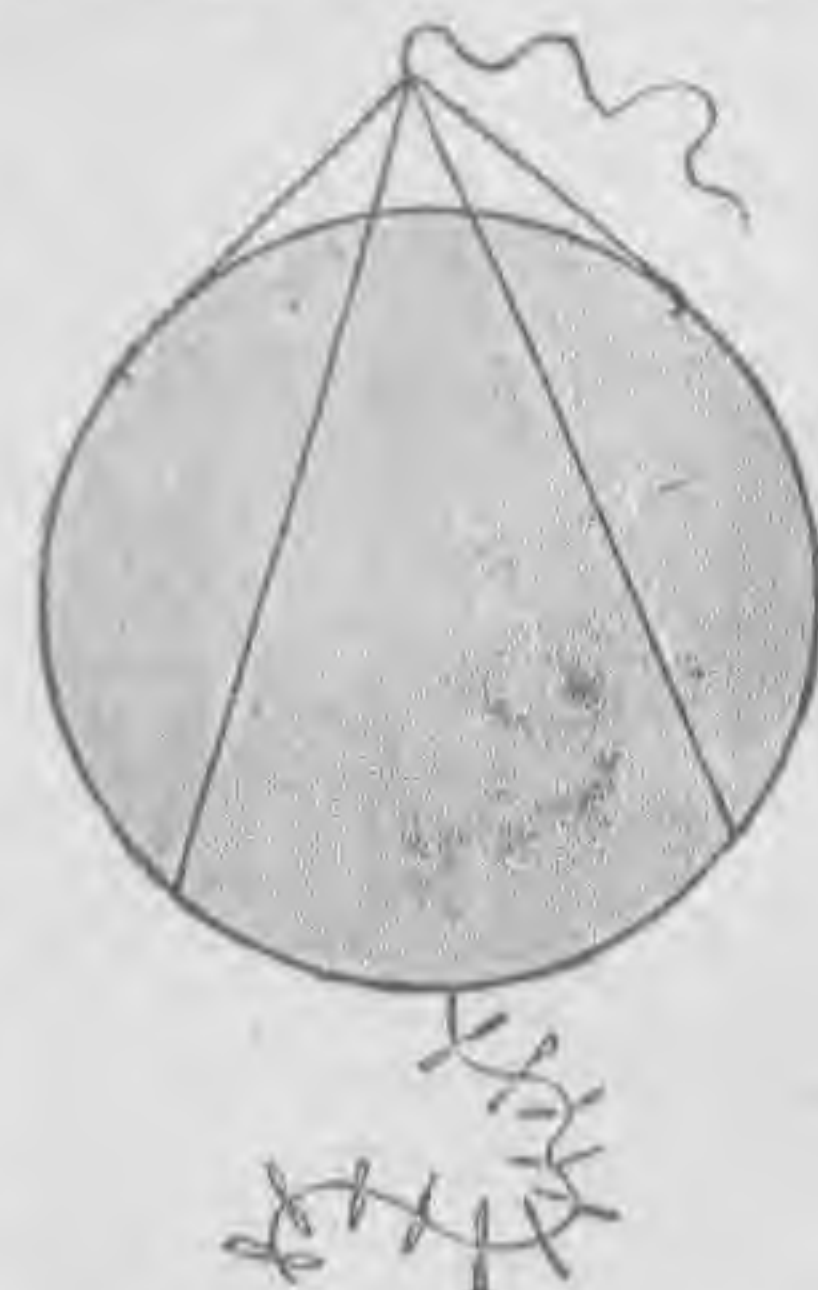


FIG. 6. HOOP KITE, PROPERLY HUNG

ends at the lower holes. Now you see when I hold the kite up by the knot in the hangings, the



FIG. 7. WASHERWOMAN.

hoop does not hang horizontally, but the tail end of the kite is some distance lower than the other end; this is exactly what is wanted (*fig. 6*). You need not follow these measurements strictly in practice, since if you want the kite to pull hard and catch a slight breeze, make the hangings of nearly equal length; and if the wind seems too strong shorten the upper strings."

"Now," continued he, "I will show you how I should manage with these other kites if I were a boy. I will begin with this bright yellow one. Let us transform it into a Washerwoman by putting upon her head a frilled cap; you see that I make her hair out of opaque paper, and the frills of her cap out of white tissue paper which will flutter in the wind as a real cap would, and as the hair did on the wild man this morning (*fig. 7*). Here is an owl which I cut out of opaque blue paper—you will perhaps say you have never yet seen a blue owl; I believe you—and I don't suppose that you ever saw a flat owl, like this either; but we won't mind trifles like these. You cannot tell the difference when the kite comes against the sky. Paste over the eyes some white tissue paper, and cut out a piece of the colored tissue paper at the same place on the kite. Then cover the whole back of the owl with paste and stick it fast to the tissue paper (*fig. 8*).



FIG. 8. OWL KITE.

In like manner I make this eagle (*fig. 9*), and this duck (*fig. 10*). So can you make whole flocks of bird-kites. You can also make others consisting of regular forms (*fig. 11*), cut out of tissue paper and pasted together; you can put papers of different color upon the various shapes; only if you wish to produce the most brilliant effect you will paste together the different shades of blue and orange, purple and yellow or red and green; these mingled with white or gray. You see that I try these three schemes of color in these three kites, although two of them I will put together as you see by bringing them beside one another and fastening them in two places by means of our flexible wire. I call these Twin Kites (*fig. 12*); but that does not prevent your putting on them the most diverse subjects; for instance, upon one you can make a dog eagerly chasing a cat, who will be running for life across the other. It is a good plan, for those of you who find a difficulty in choosing good forms to draw upon these 'mathematical

kites,' (as I will call them for the sake of distinction), to look at and copy the figures that are printed upon almost all oilcloth. For I notice that they are generally simple and can be easily made with no other drawing tools than ruler and a pair of compasses.

To hang these Twin Kites: In the first place take two strings measuring each one of them one half longer than the distance between *a* and *b*; tie the first string in *a* and *b*; the second string tie in *c* and *d*. Then measure down each string one third of its distance from the top; bring the two strings together accurately; then tie the flying string around firmly at this point (no slipped knot). You will



FIG. 9. EAGLE KITE.

now find your kite well hung if every point has been observed. Be sure and ascertain the fact that the hangings of the kite pull the same on each hanging.

"I will now show you how I make another variety of this kite which I call the 'Jumbo Kite.' I still use the familiar hoop as a foundation, but I no longer paste paper over the whole kite-frame.

"I merely cover the surface of the animal or bird represented with appropriate color and quality of paper. I copied this elephant from one of the pictorials using a familiar method of enlarging a drawing. With care either of you could do quite as creditable a piece of work. You first divide the engraving into any number of perfect squares; then, marking out on paper the size of the barrel hoop, divide that into the same number of squares—of course they are much larger. Now whereas it might prove difficult for you to enlarge the drawing without this help, yet by making the squares on the engraving sufficiently small, you can readily make a good copy. It is simply necessary for you to draw into each large square of the kite the corresponding portion of the outline that appears in the smaller squares on the engraving. It will do no harm to number the squares in both the engraving and your drawing of the hoop. You notice that the squares on your hoop drawing are not all of them perfectly square, for where they come to the circumference they are all bounded by curved lines. Never mind that, only be sure that all of the rest are perfectly square. After a few trials I will warrant you to



FIG. 10. DUCK KITE.

succeed to your own satisfaction, whether you have any natural talent for drawing or not. But

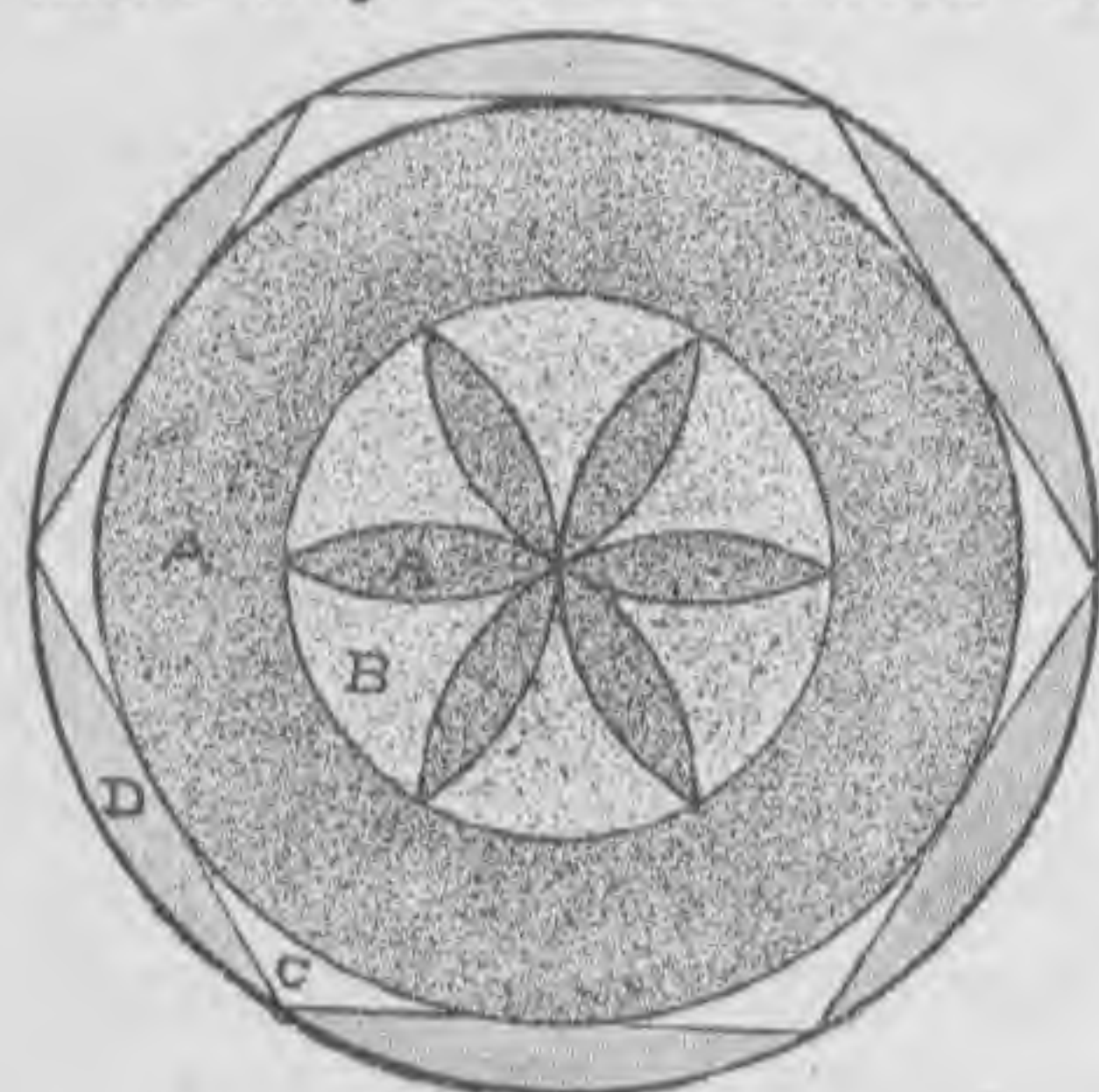


FIG. 11. COLOR KITE.

to go on with my Jumbo Kite (fig. 13). You take a piece of flexible wire, either copper, brass, or annealed iron wire, and going around the outline closely, and using a pair of bending pliers, you follow accurately every bend and curve and angle —and you have a *wire elephant* in outline. Now, with some gray paper I cover my wire elephant, putting on him a red blanket with a blue belt, and marking in with black ink the ears, and tusk, and putting the line in between the legs. Then I fasten him firmly to the hoop with extra

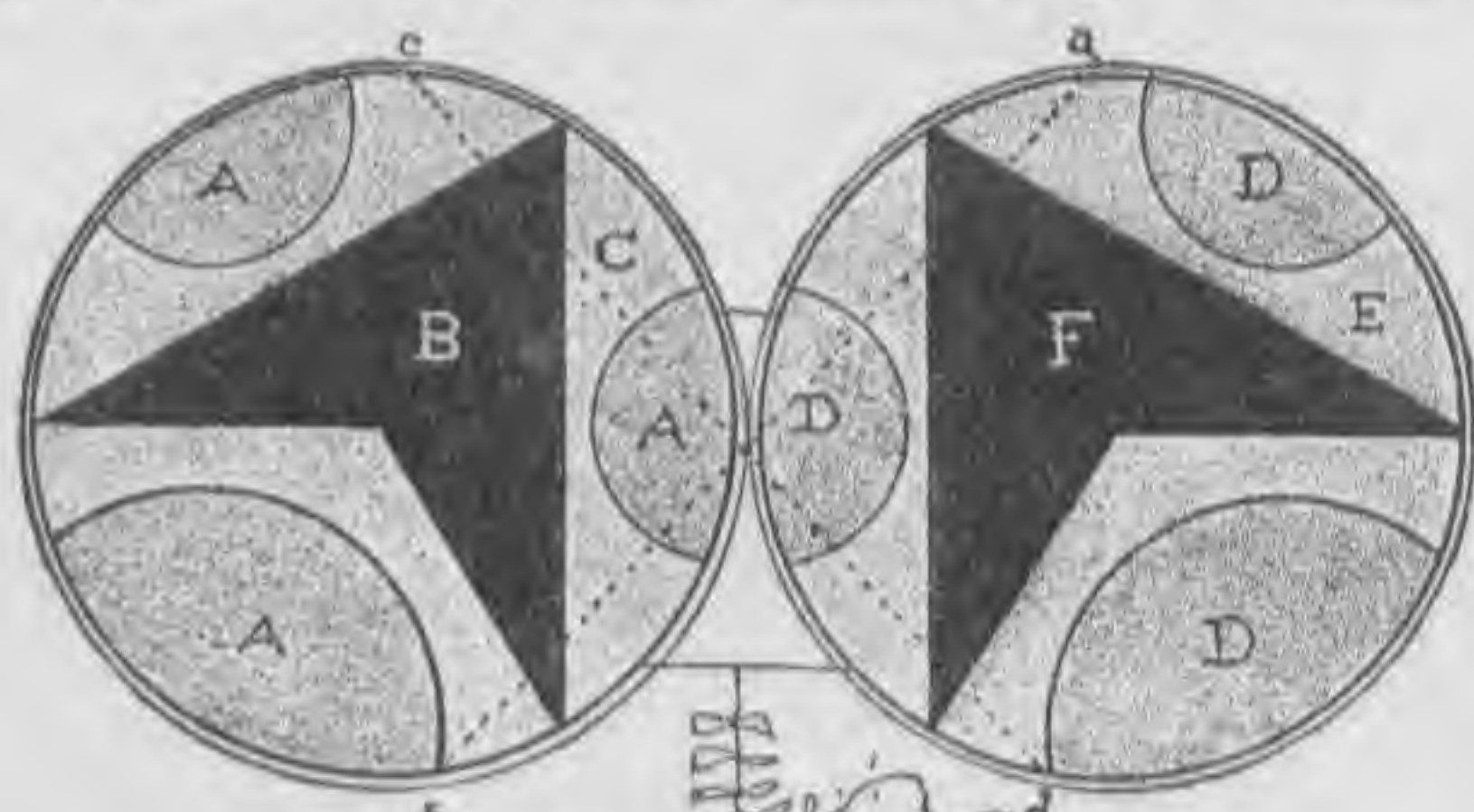


FIG. 12. TWIN KITES.

wires running to the animal from every side of the hoop, taking advantage of course of those points where he comes in contact with the hoop to twist a wire firmly around there; and after hanging and fastening a tail to it, the elephant will fly as well as any bird, and," continued uncle George, "if boys are constituted as they were once, the more singular the object that can be placed on a kite, the greater will be the fun. So if you choose you can imitate me in making a rabbit (fig. 14), a camel, a lion, a whale or any other beast, flying bird or swimming fish. But there is one specialty that I want to tell you about —and that is how you can make Fourth of July Kites —kites that will explode a bunch of fire

crackers while they are up in the air, or set off a pin wheel or a Roman candle. In the first place it is well to have a special kite —that is, one covered with sheeting instead of paper, because it is less inflammable, and it is a good plan to make the sheeting almost thoroughly fireproof by soaking it in strong alum water, and it is good to put up the kite with hempen twine, for generally the wind is stronger in the night, and should the twine break the kite would be lost in the dark. You can choose any shape for your kite that you like

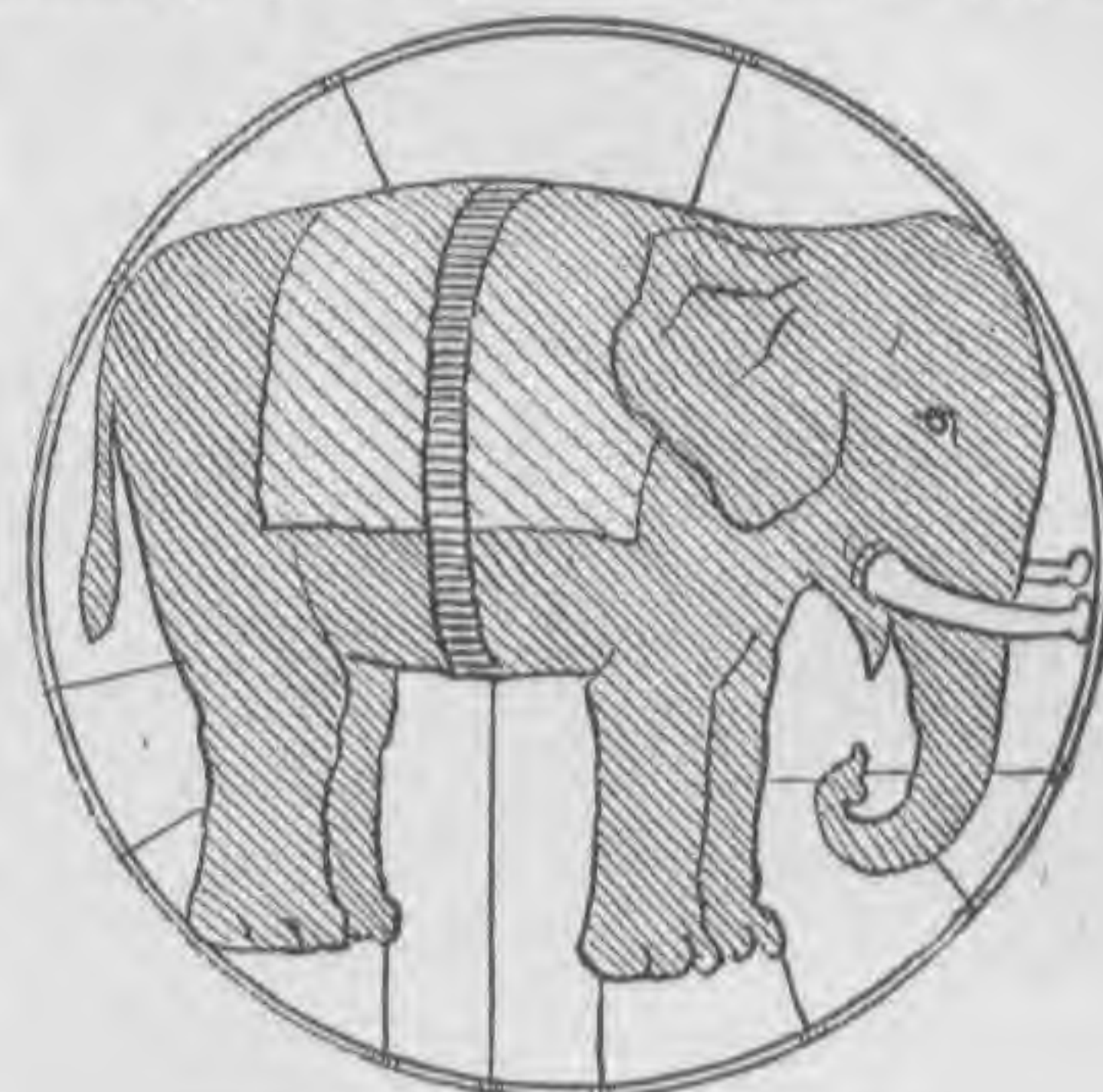


FIG. 13. THE JUMBO KITE.

—a common four-cornered kite is as good as any. Fix on its front some flexible wire, to which you will fasten your fireworks; but you must have at the same time another wire fastened to the sticks of the kite in such a way that it will support a stick of punk that crosses the fuse of the fireworks at some point; or you may have a piece of safety fuse timed so that it will touch the fireworks off at a given time. It is a fine sight to see half a



FIG. 14. RABBIT KITE.

dozen of these Fourth of July Kites in the air at the same time shooting off their different kinds of pyrotechnics in the dark so mysteriously. You can also do what has often before been done; that is to fasten a conductor's lantern upon the tail of your kite —for it is great fun for boys and their grown-up friends, too, to see the light constantly moving back and forth across the sky without ceasing."

ANNA MARIA'S HOUSEKEEPING.

BY THE NEXT NEIGHBOR.

XX.

IN THE STOREROOM.

IT is very well to buy your marketing day by day, the potatoes and carrots with the roast for the dinner, and the pears for dessert with the

ice cream —if you like to see the money spent right and left as long as you don't pay the bills. But if your half dollar must go as far as your neighbor's three, or in other words if you have only one dollar to spend where you want five dollars' worth, you must study the keeping and

buying of food. It will not make one particle of difference to your health and well-being at the end of the year whether your good beef, wheaten grits and plum pudding have cost forty dollars a week or ten or half that, but it will make all the difference between being delighted or discontented with your lot in life whether you have a little more or less money to gratify your tastes, and have a good picture or pretty room, or a pleasant visit to show for your thinkings and savings. You need not fancy it beneath you to study the quality and price of food and to count every dollar of expenses three times over. Mr. Hope, the English connoisseur whose conservatories, gardens, picture-galleries and collections of gems were the admiration of all England, who entertained princes and dukes with an elegance which they could hardly return was found by no means to have the enormous fortune supposed necessary for such style. He had attained all these luxuries and refinements by wisely spending moderate wealth, and he was so good a calculator that at his great dinners he knew the cost of every dish to a shilling, and kept his household expenses without the waste of sixpence. Lord Bulwer the novelist, an aristocrat and model of elegance living in what he considered a narrow way on \$15,000 a year, kept all his house accounts and knew to a pound how much coal, candle and provision his establishment used. The slightest waste was insufferable to him and he knew so well how to turn every guinea to its worth that he was never under money obligations to any one, and could send back the allowance his own mother made him for the sake of sweet independence. It is only half-rate people who ignore cost and shrink from calculation. An intelligent woman carries her intelligence into everything, the corners of her pantry and the depths of her flour-barrels. You have no more right to cheat yourself out of the quality and quantity of good your income should yield than to cheat your neighbor.

Look to the weights and measures of what you buy. A pair of good scales is a great security, and a yard measure which you can buy for ten cents is another. I value scales and yardstick because they give good assurance that one is fairly dealt with. One who never measures carries an uneasy feeling that she is often taken advantage of, but when every doubtful parcel is weighed, one finds that the pound of Alderney butter looked small because it was more solid than common qualities are, and the suspicious steak being of closer grain weighed more than one of flabby texture and larger size. The comfort of knowing one is fairly dealt with is worth occasional trouble. All good dealers respect a customer who sees for herself to such matters. If anything is wrong don't make a fuss about it; treat it as a mistake, and be as polite as you are

firm in having it corrected. Too many shops will take advantage of a careless buyer while they deal correctly with one who demands her dues.

Bread is the first staple to be thought of, and your family of six persons ought to find one barrel of white flour, half a barrel of graham flour with fifty pounds of buckwheat and corn meal a liberal supply for one year. The time to buy bread stuffs is just before cold weather, laying in the barrel of flour at once, but the wheat meal and other things in smaller quantities because they spoil if kept too long. Perhaps you will prefer to change the proportions, and use twice as much wheat meal as flour. Mine comes from private hands where the wheat and milling are unsurpassed, and is put up in barrels lined throughout with paper, which keeps it better. Your grocer will line your barrels or half barrels with clean manilla wrapping paper if you ask him.

It is a mistake to think it needful to buy the highest brands of produce. Learn to judge by quality alone, and you will find that "new process" and patent methods do not by any means imply the best article. Indeed experienced housekeepers are shy of buying things that are largely puffed and pressed upon them. In flour especially I have always doubted whether the highest-priced brands were worth more than some of the old sorts, and one of the best Boston dealers, belonging to the largest firm in the city supplying the best class of customers gave his opinion lately that the best St. Louis flour was equal in good bread-making properties to any of the higher-priced kinds. Always feel doubtful of the abilities of a housekeeper who professes that she never can make bread with anything less than "Haxall" and "cold blast" flour. "St. Louis for pastry? No indeed—only the one brand for everything and that the best for me," said one lofty matron, who provoked a smile on the face of knowing ones, aware that the best bread flour makes a pastry almost impossible to roll out for toughness. Price is very little criterion of quality and fitness in provisions. You must learn to know what you buy from infallible signs of excellence, the creamy yellow tinge of good flour that takes the print of the skin when squeezed in the palm, the fresh wholesome smell, the waxy firmness and unapproachable clear color of fine butter, without the suspicious pinky or deep yellow of artificial coloring, the clean bright look of fresh meats, whose quality a practiced buyer knows by a glance. Learn these things by sight and smell alone. Leave all prodding and handling to a lower grade of buyers. A delicate sense of smell is to be cultivated, and is a surer test than tasting.

For healthy living, that will ensure good complexions, freedom from headaches in general and support the strength you may use the brown bread

which is common on the best English tables, and is served with strawberries and ice cream at Belgravian lunches. The fairness of the Jersey Lily is due to such a diet through girlhood. See that the brown flour is free from black specks of cockle and buckwheat, and has not too much bran. What is sold for graham flour sometimes is only "canaille," or "middling" with common bran stirred in. In Boston we have the Arlington wheat meal, ground from wheat that is washed and very clean from other substances, and is about as coarse as corn meal. The Franklin flour is whole wheat ground fine as white flour, and nice for cake or pastry. When you have eaten these well made from whole meal, the white flour tastes poor by comparison. But the mistake of modern dealers is in sending out everything ground too fine, by which the fine flavor is soon lost. The fine corn flour does not make as nice muffins and bread as the old-fashioned meal of distinct grain, the buckwheat cakes are not good as they used to be, because the kernel is ground too fine and mixed with white flour beside, and so with rye flour which makes delicious drop cakes when eggs are plenty. If you want varied fare at small expense, you must provide largely of different grains in shape of meal, flour, grits and hominy, from fine to coarse. Oat meal makes puddings as savory as rice of the same recipes, and so does pearl hominy. They are delicate also as fritters and breakfast cakes. Just wait till I rummage out aunt Jane's private stock of recipes that have been tried for a generation, if you want to know what good American living really is like, in flavor and variety.

Butter with our bread is the next necessary, and you may congratulate yourself on living in a country where both are plenty. The English breakfast and tea where thin slips of toast figure with the scared looking pat of butter would make one of our households blush for shame. "Butter, like religion," my old dairy woman used to say, "is a matter every person must decide for himself." Not one person out of five hundred butter-makers knows how it ought to be made. The cream never should sour before churning, it should be kept in a cool airy place, away from other food, never shut in tight jars or cans, where it changes in a short time so as to be wholly unfit for use, it should be quickly churned, the butter worked free from every particle of milk without washing it or touching with the hands, and put down with the whitest salt, sugar and saltpetre, in small five-pound boxes for summer and fifty-pound firkins for winter use. Your care after buying your large tub of butter is to keep it in a clean, cool airy place, away from dust and all strong smelling things, like fish or cheese, and keep it closely covered. Once a week take out enough for use in a small jar, for it ruins butter to open a firkin daily.

Five pounds each of rice, sago, and tapioca will be found ample for a month's supply if not more. Keep them in glass jars with screw tops, if you want your storeroom to look neat and things in the best condition. Cornstarch, arrowroot, sea moss farina and all such fine food should be kept in glass and not left to stand in papers till used up. How much food is impaired by standing open, or by insects dropping in, or other things spilling in, nobody guesses. But one sees on one shelf the cornstarch package, the paper of raisins, the open sugar pail, and on the upper one the box of paris green, the insect powder and silver polish ready to be spilt by marauding mouse or hasty hand, and a feeling of security is not the result. Keep all injurious articles out of your store-room and food closets. Don't take any chances with them.

Canned food is so largely used that it seems treason to the convenience of the housekeeper to hint that there are better ways of keeping fruits and vegetables. Keep all tin cans in a cold place, all glass ones in a cold and dark one, for light injures things put up in glass as every woman knows. As soon as a tin can is opened pour the contents into a dish, for more harm is done by leaving tomatoes or acid fruit in metal after opening than by long keeping when sealed. If the inside of the can is corroded with crystallized films, it is safe not to use what is in it. All canned goods in glass or tin should be used as soon as possible after opening, for exposure to the air works rapid change in them. At least cook or scald them right away.

If more care were given to keeping ripe fruit in its natural state, half the labor of canning might be saved, and we could have not only barreled apples but pears and grapes till March or later. It is a great deal less work to buy nice sound fruit, wrap it in paper and pack in bran, moss or soft paper in tight boxes—to stand in some cold place where they only will not freeze. Aunt Jane regularly put away the choice bunches from her Isabella grape-vine in this way for twenty years, and never failed of having them for dessert till the first rhubarb came round in spring. If you can engage some farmer to gather fruit on the twig for you, leaving the stem attached without bruising, it will be very sure to keep. Paper barrels are safe things for storing fruit, expensive at first, but lasting and worth all they cost for their keeping properties.

Dried fruit is worth more attention than it receives since canned goods have crowded it out of use. But the shrewd housekeeper will advise you not to choose the nice, white thinly cut evaporated apples and peaches, which being cut so thin have lost all richness of flavor and likeness to fruit. Rather take the old-fashioned kind quartered and dried in the sun, for the large pieces not only keep flesh and flavor but the sun sweetens them, turning their

juice to grape sugar in process of drying which is a kind of after-ripening. Dried cherries with stones in are richer than pitted ones — and so with plums. Don't, whatever folly you may commit, be persuaded to keep fruit with preserving powder. It may keep, but its being fit to eat is another thing. Twelve jars of the finest Jocunda strawberries which I was induced to put up with fruit powder have just been put down on the compost heap, after giving every one who tasted them an unhappy evening, with furred teeth, drawn tongue, and sundry aches. And aunt Jane sits by and *never* says, "I told you so," in the most aggravating Christian fashion! She believes in old-fashioned dried fruit, jams and pound for pound preserves, and after this so do I.

I do not think that the adulteration of food in the better qualities is so common as it used to be, perhaps, and shrewd buyers can depend on getting good material if they know how to use it afterward. Object to very blue-white cut sugar, which has indigo in it if nothing worse, and powdered sugar which will not dissolve wholly in hot water and leave it clear, for that is mixed with white earth. Syrup with fine bubbles in it is fermenting and not good; if very thick and not too clear suspect glucose, which is not dangerous but still is not cane syrup which we have a right to expect. Beware of dark or yellowish condensed

milk, or such as leaves any sediment. No one used to good food can fail to detect the unnatural cast and flavor of mixed food.

Perhaps nothing is more deteriorated than ground coffee. So do not waste your money on gayly put up cans of Imperial Breakfast Coffee or any other fancy name, but buy a ten-cent coffee mill, order the roasted berry and grind it as you make the coffee. If you want a mixed coffee very pleasant to drink, buy a pound of dandelion coffee, and put a tablespoonful in the coffee-pot mornings. It is safe, healthy, and many persons like the sweet rich flavor it gives better than pure coffee.

If possible buy cider vinegar by the barrel for it grows better by keeping. Kerosene is enough cheaper by the barrel to make it good economy to order it in quantity. *Heat* a spoonful and see if it takes fire readily when a match is held to it. Pratt's Astral oil is the standard, and so refined that it burns without smoke or smell, gives more brilliant light and burns longer in kerosene stoves, beside being the safest oil known, and well worth the higher cost. The inferior oils are poor economy. Keep your lamps and oilcans or barrel in the coldest place possible, never in the sun or in a hot room, for heat raises an inflammable vapor from the best of oils which may take fire by accident. Of course you will not keep oils where food of any sort is stored.

WHAT TO DO ABOUT IT.

ETHEL B. "What will restore moist color paints after being packed a long time and becoming dry?" Grind them like dry colors with fine turpentine varnish.

R. D. B. "How did the Scotch Highlanders come to wear their plaids?" Some kind of a short mantle, easily arranged and not cumbersome in fighting, came into use naturally by all nations of hardy, active habits. In this respect the Scotch plaid is a variation of the short Roman mantle, which could be quickly thrown aside for combat. Similar drapery of different colors formed part of the antique Irish and Scandinavian costume. In early methods of dyeing and weaving, only the patterns made by crossing threads of various colors in the loom were attainable, like the Algerian stripes, clan tartans, and the checkered linens and linseys woven by our own ancestors in primitive times of the present era. An old MS. dated A. M. 3664 relates that the colors of the plaid were regulated by law according to the rank of the wearer. The peasants were allowed to wear a dress of but one sombre color, the soldiery two colors, the com-

moners and noble youth three, four for a franklin or lesser landowner, five for chiefs, and seven for the king. The clans adopted their peculiar tartans as a uniform by which they might be known in battle.

R. M. W. "The school-children come to me and ask so many questions I cannot answer, that I want to get an Encyclopædia. I would like an Encyclopædia and dictionary combined. Can you tell me what is the best book of the kind published and how much such a work costs?" The *Little Cyclopædia of Common Things*, though not a dictionary, is a very interesting book of reference for families and schools. Both London and American editions are issued, the former from Kegan Paul, Trench & Co., 1882, which any large bookseller will order for about five dollars. Messrs. Bliss & Sons, the publishers of the *American Garden*, send out a convenient volume in the *New American Dictionary*, of six hundred pages, illustrated, including three hundred pages of general information for the very low price of \$1.10.

W. H. V. A. I. "What will prevent hang-nails?" Trimming the skin at the base of the

nails and rubbing the fingers with vaseline at night, also using warm water always for washing the hands. 2. "How can one whiten the skin?" By washing it several times a day in as hot water as the skin can bear, sponging it with weak solution of chloride of lime, taking care that it does not reach the eyes, lips or nostrils, and applying cold cream; by taking vapor baths, doses of powdered charcoal the first thing in the morning, followed by occasional medicines for biliousness. All these recommendations faithfully followed will not fail to whiten and refine the skin. 3. "What will remove freckles?" Saturated solution of citric acid left to dry on the spots and washed off with weak soda water. 4. "Will you recommend a good work on etymology?" Isaac Taylor's *Etymology* published by MacMillan of London, A. Findlater's work on *Language*, Talbot's *English Etymologies*, and Skeat's *Dictionaries* will prove fascinating aids, though you will hardly find them outside of large public or college libraries. The best popular work on etymology is an unabridged dictionary. But no one work will prove satisfying on this subject.

LINA S. C. E-o-lande, the first letter soft and the syllables barely divided, with a lingering on the last one, is the best pronunciation of Yolande. Pronounce every new name very distinctly and rapidly twenty, thirty times over if you wish to accustom yourself to a correct accent.

Correspondents inquiring for light on particular passages in books, will please give the title of the work, page and publisher when possible. Often the meaning of some word or phrase is asked, without giving the context, and it would entail the labor perhaps of reading all the works of a voluminous author to find the sentence. The Seven Wise Men are not omniscient nor all-seeing, and what they have gained of wisdom is by hard work, which can be put to better use than going over whole cantos to find two lines which a careless reader forgets to specify. Beside, it is a good habit to observe titles, editions and parts of books. It is surprising to find how many people will read a book without being able to give its title correctly, the names of the characters, or the subjects of which it treats. Ask them for any of these and they must get the book and show it by way of answer.

ALICE L. S. The rose is the national flower of England, from the time of the York and Lancaster factions. The blue cornflower which we know as bachelor buttons (*centaurea cyanus*) is the favorite in Germany because the good old Emperor William loves it for the sake of his beautiful mother by whose side he used to gather it in the meadows when a child. The Germans call it Kaiser Blume, or, King's flower, and nosegays of it are sold in the markets of Berlin as daisy sheaves are sold in our cities. The leek is the national emblem of Wales as the thistle is of Scotland. The field or

Paris daisy, the Marguerite, is now the royal flower of Italy in compliment to the Queen Margharita who has adopted her name-flower as her own device, having her pearls set in its starry shapes, and her belongings impressed with it in every manner. The marguerite, by the way, is own cousin to our ox-eye daisy, and very much like it, only slenderer of stem and of thinner petals, and both are species of chrysanthemums, the true daisies being the little pink and white buttons of flowers which Burns' poetry and old Scottish songs are full of. The Edelweiss is the Swiss flower, a dwarf plant of the same family as our white "everlasting" of the fields but having a larger flower. The Bourbon lily, the Napoleonic violet, the Castilian rose will suggest themselves to you as historic flowers made the emblems of reigning houses. The lemon blossom is a favorite flower in Portugal.

BIRD K. who wants a nice amusement at an evening party for young people who do not dance nor play cards is referred to *Every Girl's Book of Amusement*; or *Evening Amusements* and *Drawing-Room Plays*, price \$1.00 each, which the publishers of this magazine will send her.

N. H. The cards made of birch bark can be had of Albert W. Bee, stationer, Tremont street, Boston.

MAYLIE. 1. "Are the planets inhabited?" No sign of life has ever been discovered in them.

2. "How much of the present time is equal to one year of the time of the Old Testament?" The year of 365 1-4 days was so measured from a very early period of the world. The ancient Egyptians marked time by the sun-dial, and its least shadow falling on the day of the summer solstice it was natural for the year to fall in the periods between the two longest days of the twelvemonth. The years of the lives of the patriarchs were probably as long as our own. Josephus says that men being much beloved by God and newly made by him, with strong constitution and excellent temper of body, using better diet, the vigor of the earth at first producing better fruits, joined with their constant temperance and labor, a sweet temper of air, their knowledge of herbs and plants might well attain unto as long a life as the Scriptures mention. The tradition of Chaldean, Phenician, Egyptian, Greek and Brahmin history agrees that men anciently lived a thousand years. Many attribute the shortness of life since the flood to a change in the quantity of oxygen in the air, and its corruption by the continual decay of animal and vegetable matter ever since.

MRS. E. L. S., who inquires for a school for girls in Boston is referred to the circular of Chauncy Hall School which numbers daughters from the best families as well as sons among its pupils. Teachers of private schools in the Eastern States are invited to send their circulars to

THE WISE BLACKBIRD.

C. Y. F. R. U. COURSE.

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WIDE AWAKE



VOLUME S

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FRANKLIN AND HAWLEY STREETS



TALES OF THE PATHFINDERS.

BY ARTHUR GILMAN.

IX.

THE LOST EXILES OF TEXAS.

IF we could have stood upon the shores of Matagorda Bay, with the Indians on a certain day one hundred and ninety-nine years ago we might have been witness to a strange sight. Before us would have been spread out the waters of a broad and sheltered harbor opening towards the sea through a narrow passage which was obstructed by sand-bars and an island. One's eyes could not reach to the end of the bay, which is fifty miles long; nor could they see land beyond the sea-passage, for that opens into the broad Gulf of Mexico. Let us take our stand on the shore and see what we can see.

There appear to us, as if by magic, the forms of two French gentlemen accompanied by a small party of soldiers, who come from the mouth of the bay, and carefully thread their way along the shore. It is a strange company of men. The leader is a native of Rouen, and he says that few of his companions are fit for anything but eating. He thought that his band comprised creatures of all sorts, like Noah's ark, but unlike the collection of the great patriarch, they seemed to be few of them worth saving.

As we look, the men begin to gather together the pieces of drift-wood that the peaceful waves throw up on to the shore. They are evidently planning to make a raft; but, as one of them casts his lazy eyes in the direction in which ours were at first thrown, he exclaims with evident joy, in his native French, "*Voilà les vaisseaux!*" or words to that effect, for he has descried two ships entering the bay from the Gulf. The ships slowly keep their way towards the inland coast, and from one of them there lands a man evidently higher in authority than any we have seen. His air is calm, dignified, forceful, persistent. He announces to those about him that they are at one of the mouths of the great Mississippi, or, as he well calls it "*La*

rivière funeste," the fatal river. "Here shall we land all our men," he adds, "and here shall our vessels be placed in safe harbor."

In vain does the commander of one of the little ships protest that the water of the bay is too shallow and that the currents are too powerful; the strong man has given his order, and it must be obeyed. The channel was duly marked out, and on the twentieth of February, one of the ships, the *Aimable*, weighed anchor and began to enter the bay. The commander was on the shore, anxiously watching to see the result, when, suddenly, some of his men who had been cutting down a tree to make a canoe, rushed up and exclaimed, with terror in their faces, "The Indians have attacked us and one of our number is even now a captive in their hands." There was nothing to be done but go in pursuit of the savages.

It did not take long to arm a few men, and off they started with their leader in the direction that the Indians had taken. They were overtaken and a parley ensued. The leader's thoughts were now in two places at once, and he was not far enough from the shore not to be able to cast a glance towards the *Aimable*, and to say to his lieutenant, as he saw the vessel drifting near shoal water, "If she keeps on in that course, she will soon be aground." Still, no time was to be lost. The parley with the Indians did not hinder them long, and soon they were on the way towards the village whither the captive had been taken. Just as they entered its precincts and looked upon its inhabitants, clustered in groups among the dome-shaped huts, the loud boom of a cannon burst upon their ears. The savages were smitten with terror, and the commander felt his heart beat quickly as he looked again towards the water and saw the *Aimable* furling its sails, a sure token to him that she had indeed struck the rock and would be lost, with all the stores intended for use when her passengers should be landed.

Undaunted by the prospect, or even by the dark

picture that his imagination conjured up, he pressed onward among the miserable savages, until his man had been recovered. Then he returned, and found his vessel on her side, a forlorn spectacle. Now the wind rose, and the sea beat upon the helpless hulk. It rocked backwards and forwards on its uneasy bed; its treasures of boxes and bales and casks were strewn over the waters; the greedy Indians made haste to seize what they could; and as night approached the hurriedly organized patrol of soldiers had all that they could do to face the deepening storm and protect their goods from the treacherous natives, as the less treacherous waves cast them upon the sands of the shore.

Who were these men, thus unceremoniously thrust upon the shores of the New World? How did it happen that they were found at a point that no European had before seen? Perhaps it is not necessary to ask how they happened to mistake the entrance to Matagorda Bay for one of the broad mouths of the Mississippi. They were Frenchmen. So much their speech has told us. The leader was Robert Cavelier, Sieur de La Salle, a man of whom the historian Bancroft says that he had no superior among his countrymen for force of will and vast conceptions; for various knowledge, and quick adaptation of his genius to untried circumstances; for sublime magnanimity that resigned itself to the will of Heaven and yet triumphed over affliction by energy of purpose and unflinching hope.

In early life he had renounced his inheritance and devoted himself to the service of the Church, but he soon left the order of Jesuits which he had entered, because, as Mr. Parkman surmises, he did not relish being all his life the moved and not the mover; because he could not give up his individuality and remain one of the great body, all of whom were compelled to march in a track pointed out to them by a superior. It is pleasant to know that he left the order with good feelings on both sides.

In 1667, we find the young man already entered upon the career of adventure in which the rest of his life was to be spent. He had sailed to Canada, the place of attraction for ambitious French youth, and there he remained several years, making the familiar acquaintance of the Indians and learning their language, while he was dreaming, like many others, of the passage to China through the rivers that came down from the westward. He had looked, too, in his vivid imagination, over the vast plains of the great West, and had become filled with brilliant visions of an empire that he hoped some day to see established there for France. We have already learned how France took possession of the region, at this very period.

In such state of mind, La Salle sailed back to France in the autumn of 1674. He was well received and the next year returned, ennobled, and

more than ever determined to push his grand scheme for the acquisition of the great West. His was no plan to indulge in theatrical spectacles, but to take actual possession. Year after year we see him steadily pursuing his single plan. He thinks nothing of crossing the Atlantic, of pushing his course through the trackless woods, or of paddling his frail canoe over the wild waters of the broad lakes. Indians did not daunt him by their cruelty, nor wild beasts affright him by their numbers and ferocity. Onward, ever onward, he pressed.

In the year 1680, we find him taking possession by actual occupation, of the region now comprising the State of Illinois. It was the first time that civilization had asserted itself there. La Salle built a fort, and, in memory of the trials of the way, called it *Crève-cœur*, which signified Broken-heart; but it did not testify to any broken courage on his part;—rather it was a monument to the obstacles that his persistence had surmounted.

Two years later, we find his canoe, which seems to our eyes now the emblem of an aggressive civilization, flitting along the Illinois River, entering the muddy Mississippi, and floating down its thousand miles to the Gulf. This is not the whole picture, however. We see the party start from the Chicago River, in the cold weather of December. The rivers are frozen. Canoes must be dragged over their snowy and icy surfaces, and baggage can be transported in no way but upon rough sledges. Can you not see the slow procession of fifty persons dragging themselves along day after day through the region inhabited but by savages and wild beasts, suffering from cold and hunger, and all held to their duty by the persevering leader who had brought them there?

There are twenty-three Frenchmen, eighteen Indian braves, belonging to those terrible Abenakis and Mohegans whose "midnight yells had," as Mr. Parkman says, "startled the border hamlets of New England; who had danced around Puritan scalps, and whom Puritan imaginations painted as incarnate fiends." There were besides, ten squaws and three children. A motley collection and one not calculated to inspire confidence nor hope for the success of any undertaking. It was not until they had passed the point where the river broadens into Lake Peoria that they found water in which they could float their canoes. Then they continued on, until early in February they found themselves on the banks of the Mississippi. It was filled with ice, and no canoe could navigate it.

After a delay of a few days, they found the river free, and again took up their course southwards. A day more brought them to the confluence of the muddy Missouri, which some of my readers have probably seen, where a mighty stream coming down from distant mountains, enters another not so mighty as itself, and plowing its way across its

current, burrows under the soil on the opposite shore. This did not detain the voyagers, though they encamped there over night, and then pursued their course towards the unknown. A few days showed them the mouth of the Ohio, but still they pressed onward. It was near the end of February, the temperature was growing perceptibly warmer as they approached the South.

At a certain point they encamped and sent out their hunters for game. One did not return at night, and a horror seized the others, as they thought that he had been overtaken and killed by hostile Indians. Day after day the woods were scoured in the hope of finding the missing companion, but it seemed vain. A fort was erected for the protection of the party on a high bluff, and named for the lost hunter, Prudhomme. At last they met some Chickasaw Indians, and messages of amity were exchanged through them with the people of their village, not far distant. Soon afterwards Prudhomme was discovered, half-dead from exposure, for he had lost his way while hunting.

Thus the expedition progressed for many days, until at last the little canoes found themselves thrust out through the turbid channels of the delta, into the clear salt waters of the Gulf of Mexico. They had stopped on the way after leaving Fort Prudhomme, at several Indian towns, had been well treated by the natives, and they had seen the mouths of the Arkansas and the Red rivers. The whole valley of the Fatal River had been laid bare to them, and now La Salle thought the time had come to take formal possession for his sovereign.

Near the mouth of the river, the party came together on the ninth of April, 1682, and a ceremony took place that was very similar to the one of which we have read, at the Sault Ste. Mary, a few days less than eleven years before, by which France had taken possession of the Northwest. It did not rival that in the magnificence with which it was conducted, though the ceremonial was, perhaps, a little more elaborated, but it seemed to have a better basis of fact, for La Salle had actually passed through the heart of the region which he now claimed. A column was erected, of course, and a tablet of lead was buried near it, such as those that had been placed in the ground at various other places by Frenchmen, bearing testimony to the fact that Louis the Great claimed to rule the land.

It was nearly the end of November of the following year, when La Salle reached Quebec, after having retraced his route by long and tedious stages up the rivers that he had followed down to the Gulf. Then he returned to France to tell the story of his travels, and began to use his influence to induce the government to send out an expedition to take controlling possession of the Mississippi region. He argued with all his powers, saying that by fortifying the river, the French might control the continent. It was really a grand and

brilliant proposition, and the King and his minister gave more than was demanded. Four vessels were prepared, instead of the two that La Salle asked for. The expedition comprised a hundred soldiers, thirty volunteers, many mechanics and laborers, several families and a few girls, who looked forward to certain marriage in the new land.

On the twenty-fourth of July, La Salle set sail from Rochelle, with four hundred men in his four vessels, leaving an affectionate and comforting letter as his last farewell to his mother at Rouen. We have already seen how he was thrown upon the shores of the New World. There, on the sands of Matagorda Bay, with nothing to eat but oysters and a sort of porridge made of the flour that had been saved, the homesick party of downcast men and sorrowing women encamped until their leader could tell them what to do. They did not even know where they were. They were intending to conquer the Spaniards, but they knew nothing of their whereabouts. They were attacked by Indians, and finally, some three weeks after the wreck, the commander of the ships sailed away for France leaving La Salle and his forlorn company behind!

A site was soon chosen on the river now called Lavaca (a corruption *La Vache*, the cow, a name given it because buffaloes had been seen there), and a fort was built called St. Louis. La Salle had scarcely finished this establishment, when he determined to search for the Mississippi river, for he had by that time concluded from explorations, that he had not found it. On the last day of October, he started, and towards the end of March, the party returned, tattered and worn, almost ready to die; but though the strong body of the leader had given away, his stronger spirit was still unbroken, and he soon determined to set out to find the Illinois region, where he left a colony formerly, and where he felt sure he could obtain relief. There was no chance for them to return directly to France since their vessels were all gone, and this seemed their only hope.

A party of twenty was formed to undertake the perilous enterprise, and on the twenty-second of April, 1686, they took their way from the fort, bearing on their persons the contributions that their fellows who were to remain had been able to bring together for their comfort.

The party experienced a variety of hardships, quarrelled among themselves, and finally, on the morning of the eighteenth of March, 1687, one of them shot and killed the brave leader. The remainder kept on, finally reached Canada and were taken to their native land. To the colonists at Fort St. Louis, no ground of hope ever appeared, though they felt that the people of France must have an interest in them, and so they kept a lookout over the water for a ship coming to their relief. It never came, alas, and no one knows to this day what became of the Lost Exiles of Texas!

IN CASE OF ACCIDENT.

BY DR. D. A. SARGENT.

IX.

EPILEPSY.

THE BRAIN.

THE brain consists of a soft grayish white substance which is enclosed in the cavity of the skull. Its surface is formed into convolutions, and its interior is composed of a complex arrangement of nerve cells and tissues. It is the seat of the intellectual faculties, the will and the emotions. It is also the seat of the five senses (seeing, hearing, smelling, tasting and feeling), and the function which controls the action of the vital organs.

The brain is put in communication with all parts of the body by a system of nerves. These nerves run down the inside of the spinal column in the form of a large cord. This cord is composed of nerve cells and nerve fibres. The nerve fibres leave the spine in pairs, of which there are thirty-one, and then divide and subdivide until their minute branches extend to every part of the body.

It would be impossible to stick a pin in any portion of the skin without causing pain, which would bring a command from the brain, or spinal cord, to do away with the cause of the injury. The nerves through which the sense of pain, or of feeling, is conveyed to the brain, are termed *sensory nerves*; and the nerves through which a command for movement is sent are termed *motor nerves*.

There is also the system of *sympathetic nerves*. These have their origin in the skull, and extend down in front of the spine in the form of a double chain of ganglia. They have an important influence on circulation, nutrition and secretion.

The pneumogastric nerve, a mixed nerve (so called because it has both motor and sensory fibres) has its origin at the base of the brain, and presides over the function of the vital organs.

Any accident to the brain or spinal cord, will of course be followed by serious consequences. If the brain be injured, or its function interfered with, insensibility results, and the capacity for feeling, movement and speech is lost. If the spine be injured, the lower half of the body and limbs are paralyzed.

If the upper portion of the spinal cord, at the base of the brain, is injured, the action of the heart and lungs is interrupted, and death follows.

Sometimes a single nerve, or branch of nerves, is injured, by being cut, torn or compressed. Then the sense of feeling and power of movement is lost in those parts to which the nerve was distributed.

Perhaps the most frequent functional disturbance of the brain (of consequence) occurs in what is called epilepsy. The exact cause of this disorder has never been ascertained, but it is known to be due to some disturbance of the brain and central nervous system, and is constitutional in many persons.

The first indication is often a scream, or an unnatural shriek or cry, after which the patient falls in a state of unconsciousness. There is frothing at the mouth, and a convulsive jerking and twitching of the limbs which at times is so violent as to produce a dislocation. The muscles of the face are spasmodically contracted, and the features distorted.

Treatment. Persons suffering from an attack of epilepsy should be placed in a horizontal position with the head slightly raised. The latter is especially necessary if the face and neck are flushed. As soon as possible relieve the neck and chest of all tight-fitting garments. If within doors open the windows and let in an abundance of fresh air. Keep back the bystanders who naturally crowd around much to the discomfort of the patient and of those who are trying to be of service.

Little can be done to prevent the spasmodic convulsions, but care should be taken that the patient does nothing to injure himself. If the tongue is extended and in danger of being bitten, it is well to place a cork, or wad of cloth between the teeth. In doing this be careful not to compress the chest, or to interfere with the breathing.

If the head and limbs are jerked about violently efforts should be made to control them. I do not mean by this that an attempt should be made to hold the head and limbs rigidly and prevent all movement. An attempt of this kind would probably increase the convulsive efforts of the patient. A gentle restraint that will simply guide and control the movements, is all that is necessary. Let one person hold the patient's head, while others grasp the limbs.

After the convulsions cease the patient will remain quiet for a few moments, and then perhaps return to consciousness. At this time try to ascertain his name and residence, should he be a person unknown to you, as he is likely to fall into a profound sleep which may last for hours. During this interval the patient might be taken to his home. On no account, however, should he be left alone, as he might awaken in a state of bewilderment. It would

be well for every person who is subject to epileptic attacks to carry his name and address about him with a record of the peculiarities of this disorder and its treatment, sufficiently explicit to be of service to those willing to render assistance.

This disorder though it may not be followed immediately by fatal results, often gives rise to accidents that are more or less serious in their consequences. A fall upon the head from a carriage, on a curbstone, or against a lamp-post, when in a convulsion, is likely to produce an ugly if not fatal wound. So would a fall against a stone, or any heavy piece of furniture. On this account those who are subject to epilepsy should be carefully watched, that precaution can be taken against accidents and assistance rendered at once.

APOPLEXY.

This accident to the brain is more to be dreaded than epilepsy, for, though less frequent, apoplexy is usually followed by fatal results. It is caused by the rupture of a blood vessel which allows the blood to flow over and into the brain. The patient becomes partially paralyzed and almost immediately passes into a state of unconsciousness. The face and neck are red and swollen, and the breathing soon becomes heavy and stertorous.

Treatment. Efforts should be made to loosen the clothing about the neck and chest, having first slightly raised the head and upper body.

It is important to give the patient plenty of fresh air, and to keep bystanders aside as in epilepsy and fainting.

Cold water, or crumbled ice wrapped in a towel, may be applied to the head and face and, in some instances, may afford relief, but as a general thing, little can be done to restore the patient.

The usual fatality of this misfortune renders it necessary to distinguish it from other conditions of unconsciousness. Where a person has simply fallen in a fit of syncope, or has fainted, as it is

commonly termed, the face is deathly pale, the breathing is short and quick, and the pulse is feeble. In apoplexy these symptoms are reversed.

INTOXICATION.

This is a condition which is frequently confounded with apoplexy.

Sometimes a person is found lying on the pavement in a profound stupor. The smell of liquor from his breath, and the general appearance of the clothing lead one to infer that the person is drunk. This would not always be a safe conclusion, however, as apoplexy might occur to a person who had been drinking intoxicating liquor, though not to excess. In intoxication the helplessness and stupor come on gradually, whereas in apoplexy they came on suddenly.

In the former case the person can be moderately aroused, but in the latter case seldom, if ever. The breathing in intoxication may be heavy, but it is more likely to be quiet. In apoplexy the breathing is always loud and difficult.

Treatment. Place the patient on his side with his head slightly elevated. Loosen the clothing about the neck as in case of apoplexy. If vomiting does not occur try to produce it by tickling the throat with a feather, or, if the patient can be made to swallow, by giving him a mustard emetic, followed by a profusion of warm water.

In the meantime see that the person is protected from the cold, which tends to deepen and prolong the stupor. If possible get him into a warm room and, what is better, into a warm bed.

If the patient has been for a long time under the influence of liquor the system will be more or less exhausted, and when the stupor is over, the stomach will crave nourishment. This should be given in small quantities in the form of beef tea, yolk of eggs, or warm soups.

If delirium tremens or nervous exhaustion follows, send for a physician.

LITTLE BIOGRAPHIES.—HOW SUCCESS IS WON.

BY SARAH K. BOLTON.

IX.

ALEXANDER H. STEPHENS.

IN a Georgia cornfield, might have been seen, some years ago, a feeble little boy dropping kernels for the colored "hands." The hills were

four feet apart, and by quick, faithful work, he could cover ten acres a day. This little lad's lovely and intelligent mother had died when he was a baby, three months old. He had one "own" brother and sister, and there were five half-brothers and sisters. This family was poor, but its young members were devoted to each other.

At eleven this slight boy was holding the plow; strange work for a child much smaller than boys of his age, but children do not hesitate at impossible undertakings when love rules the home. It was the next year, I think, that a Sunday-school was started in the little Georgia town, and Alexander — this was the name of our child plowman — who had read no books excepting the New Testament and spelling-book, was invited to attend. He undertook to read Genesis by the light of a pine-knot fire, after the day's work was over, and soon sat up till midnight fascinated with the story of Moses and Joseph. The taste for reading was formed those nights — the delight, the solace of a long lifetime.

Three years later, the father and the step-mother both died within the same week, and the family was broken up and scattered. Alexander went to the home of his mother's brother. His father had been a good, kind man but with no genius for making money, yet his death was a sad blow for his helpless flock. Intelligent and sympathetic, his pure life had been a great moral force in the home. The actual work for each child would be no harder now than it had been, perhaps; the great woe of it was that each must go his own way, alone. Alexander knew that he should not be strong enough for farm work. He hoped to obtain education sufficient to enable him to become a merchant's clerk. For nearly a year, by means of the pittance left by his father, he attended school, and then at fifteen regretfully bade good-by to the schoolroom and carried home his books. The next week he was to set forth. He meant to go to a neighboring town and seek a place in a store.

Sabbath morning, with a heavy heart, he started for his last day in the Sunday-school class. The superintendent, Mr. Mills, asked how he was prospering in his studies.

"I have finished school," was the low answer.

"What are you going to do?"

"Try to find a place in a store, and save some money, if I can, for further study."

Mr. Mills asked whether he would not like to go to college, and study Latin.

If a great hope stole into the lad's heart for a moment, he resolutely put it away. "I should like it," he said quickly, "but I have no means."

And then came the unexpected words:

"I will lend you the money."

Alexander was too astonished to accept the proposal. He said, at last, that he would talk the matter over with his uncle and aunt. He went home heart and brain in a tumult. The uncle said little. The aunt argued how much he could accomplish in the world with an education; she said he ought to accept at once, thankfully. She made the boy a few new clothes, freshened up his old ones, and with a woman's enthusiasm encouraged him, as he started into the untried life.

Young Alexander pondered much the first few days. He could not bear to be dependent but since it seemed to be needful, he would strive to make friends, to be manly, to give Mr. Mills reasons to be proud of him. The Sabbath-school had turned his mind toward the pleasures and benefits of reading, furnished him a benefactor, and opened his way, perhaps, toward usefulness and greatness. Doubtless years after when, as Horace Greeley said, Stephens stood the most eloquent man in Congress, he would have said with Senator Frelinghuysen: "*To go from the Sunday-school to the Senate of the United States, I consider no promotion.*"

College life covered a happy, joyous period in the life of this earnest Southern boy. He boarded with a clergyman by the name of Webster, who, he afterwards learned, had made the suggestion to Mr. Mills to advance the money for his education; and so fond did he become of this man that he adopted his middle name, and ever after wrote his own, Alexander *Hamilton* Stephens.

His first Latin book was *Historiæ Sacræ*, and here his Bible study so helped him, that he soon stood at the head of his class. He became exceedingly popular with both his instructors and his fellow-students. A letter to a friend shows how well he deserved it:

During the four years that I spent at college, I was never absent from roll-call without a good excuse; was never fined; and, to the best of my belief, never had a demerit mark against me. No one in my class, at any examination, ever got a better circular than I did. . . . In my rooms we talked, laughed, told stories, more than in any room in college. But there was never any dissipation in it; neither liquor nor cards were ever introduced; nor were indecent stories or jests ever allowed. I "treated" as much in the way of fruit, melons, and nicknacks in season as any other boy in college; and yet my average annual expenses were only two hundred and five dollars. Tobacco was not on my list. What I saved in hats, shoes and clothes, I spent in this way. It was not to gain popularity, only to give pleasure to those about me.

These are helpful suggestions to boys that have an ambition to stand well with their fellows, while they also push ahead, and a boy without ambitions rarely comes to true greatness.

College days ended at last, and now came the struggle with the world. Everybody comes to this struggle in one way or another. Perhaps it is to secretly overcome various temptations; perhaps it is to openly earn bread; perhaps to patiently seek chances to earn.

Young Stephens had already engaged as assistant in an academy. Teachers, patrons, students, were strangers to him. He missed the college friendships. The work wore upon his nerves. He had no money and was of course in debt for his education. He walked his two miles in the early morning before the principal was awake. He wrote in his journal:

In these walks, I poured forth my griefs to myself, and often wept. . . . A classmate called to see me and told me in a jocular way of a pleasure trip to the Springs, which had cost him from five hundred to one thousand dollars. Little did he know my feelings at the relation. They were those of a destitute child, almost starving, yet too proud to beg or steal.

He was a fine teacher because he was naturally a good disciplinarian and was also genuinely interested in the progress of his pupils; but at the end of four months, with broken health, he accepted a position in a private school. Ah! there was another reason for his leaving, untold for forty years, and then only to a single friend. In his school was a girl of charming disposition, whom he could not help but love. He had reason to believe that she was equally fond of him. Poor, with no profession, so frail in body and health, with death as he thought in the near future, he could not ask her to be his wife. Neither could he stay where she was, and see her day after day; so crushing all the new and inspiring helps of a pure affection, he hastened away, travelling all night, breaking his own heart, to render her prospects in life brighter, he believed, than he could hope to make them.

In the private school there were thirteen pupils, for whose tuition he was to receive five hundred dollars yearly. Ignoring his fragile health, he admitted several poor lads to the school, without charge, remembering his own longing for an education. The next year, so much did his patrons like him, he was offered a salary of fifteen hundred dollars; but his health completely failed, and he was obliged to return home.

What now was before him? A little money remained to him and he resolved to study law as soon as he should become stronger. Some of the townspeople "made fun" of this resolution; he was so small and boyish—he weighed but seventy pounds. This stung him to the quick, but he wrote in his journal:

My soul is bent upon success in my profession.

You will see he conquered by resolution; not by chance, nor by dash, but as Wellington and Napoleon and Washington and Grant conquered—by the steady exertion of an iron will. And says he:

No one can imagine how I worked, how I delved, how I labored over books. Often I spent the whole night over a law book, and went to bed as the dawn of day was streaking the east.

He was too, by nature, ambitious. He wrote to a friend:

I have a restlessness of spirit and ambition of soul which are urging me on. My desires do not stop short of the highest places of distinction. I feel the ragings of ambition like the sudden burst of the long smothered flames of a volcano.

He longed, too, for companionship. "I do wish I had an associate—a bosom confidant, whose tastes and views were similar to my own, and whose business and pursuits were the same," he said once; but the student did not find him, and he turned and bent himself to his solitary work.

The day for examination came, a hot July day, under a Southern sun. He was nervous, anxious. But when it was over, the chief lawyers declared they had never witnessed a better examination, and the leading lawyer of the county offered him a partnership, which he declined because he loved the old home and determined to succeed there.

The first step had been successfully taken; but still he knew that for days and weeks he might not have a case, or an item of legal business. He was living most frugally on six dollars a month! But the young lawyer who had his first opening into a fair future from the Sunday-school, did not forget to whom to look for help; for we find in his journal, July 24:

And now, in the beginning, I do make a fervent prayer that He who made me and all things, and who has heretofore abundantly blessed and favored me, and to whom I wish to be grateful for all His mercies, may continue them toward His unworthy servant; that He may so overrule my whole course that a useful success may attend all my efforts.

The next week he attended court some distance away. He walked ten miles to the house of his uncle, carrying his saddle-bags on his shoulders, and there borrowed a horse for the rest of the journey. When near the town, he stopped in a pine forest, changed his travel-stained clothes for a pair of white cotton trousers which might pass for linen, and appeared among his brother lawyers, fresh and trim, only able, however, to tarry one day. For his first address in court he received the munificent sum of two dollars in silver!

But presently came his first real case, where a mother asked the restoration of her child which had been stolen from her by its grandfather. The Court House and yard were full of people. The boyish lawyer was unknown and uncared for, but he had not only carefully thought out his arguments, but had declaimed them on a lonely hill-side. He spoke with all the pathos, tenderness and conviction of one who having lost a mother, intuitively knows the depth and power of a mother's love and her desolation when she is bereaved. His great brown eyes filled with tears, his voice quivered. Even the five judges wept, as they restored the child to its mother, and "little Aleck Stephens" took his rank as one of the first orators of Georgia. Some one there remarked that "Stephens would go to Congress in ten years;" but he went before the time they prophesied.

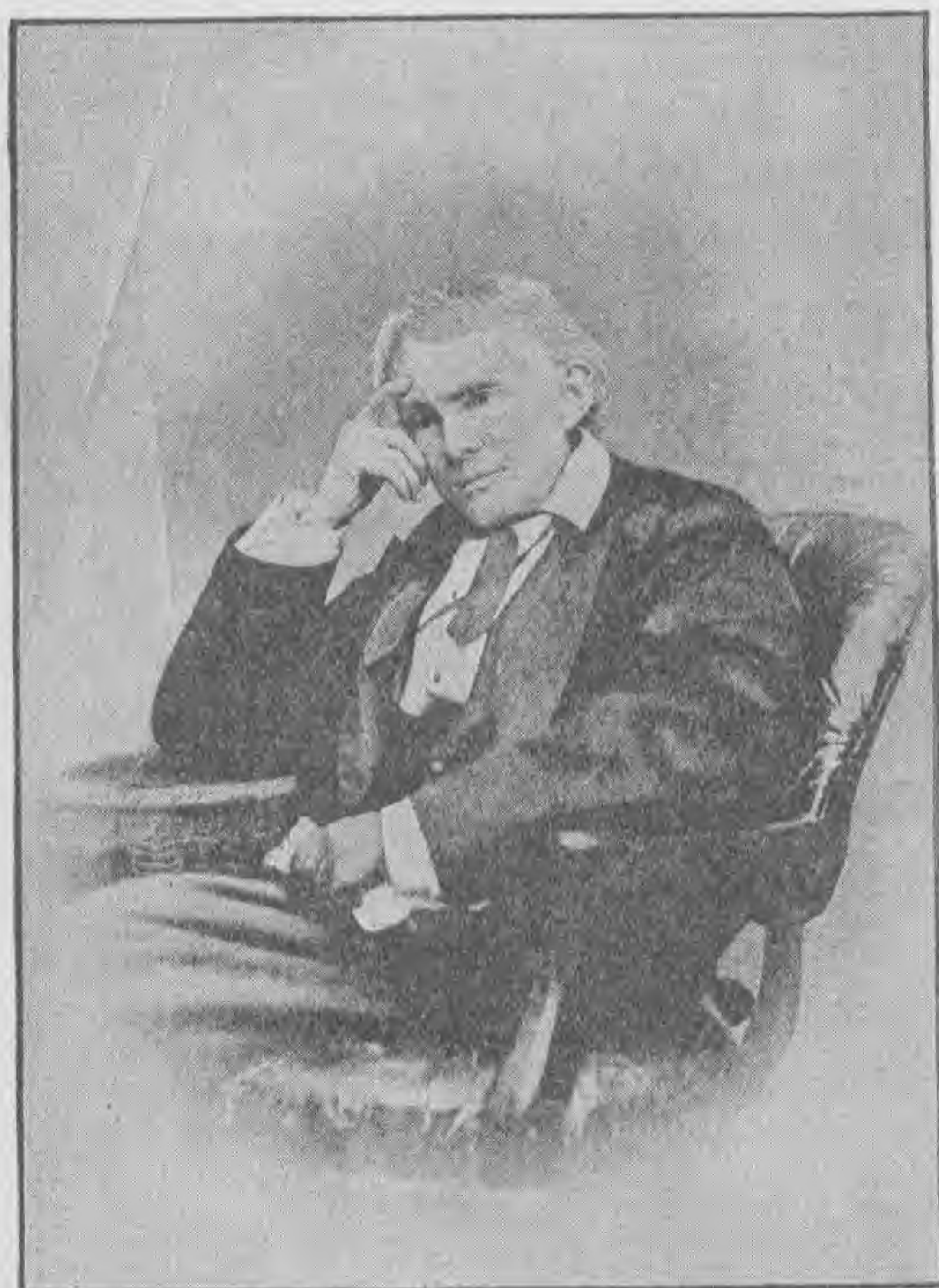
But you may be sure that the honor came through resolution and work. He wrote to his warm friend,

Richard M. Johnston, who has published a valuable biography of Mr. Stephens :

My time was occupied almost constantly on week-days in reading, studying and office business. I never lounged about with village crowds.

At twenty-four, he was elected to the State Legislature. Here he spoke rarely ; but whenever he did he commanded attention by his eloquence and by his knowledge of his subject. The next year he was prostrated by illness — consumption was feared. However, he rallied, and five years later, he was elected to the State Senate.

Meanwhile he was sending his half-brother,



ALEXANDER H. STEPHENS.

Linton, through college, loving him almost with a mother's tenderness, and writing most frequently. He tells him :

No day passes but you are in my mind, and you do not escape from my dreams by night.

And then he gives wise counsel :

Always look up ; think of nothing but objects of the highest ambition which can be compassed by energy, virtue, and strict morality. In all things do nothing on which you could not invoke the divine blessing. Never condescend to notice small offenses. Be above them.

Again he writes him :

To be a scholar requires energy, resolution, time, self-denial, patience and ambition. He that possesses them can control not only his own destiny, but that of others.

Alexander Stephens had now reached the age of thirty-one. His college debts were paid and he was helping others as he had been helped. Persuasive in speech, profound in argument, Georgia had sent him to the Congress of the United States. He had no money to buy votes, no influential friends to help, but his genius and his moral character, winning the people, won the position. He could now turn back to his journal where he wrote years before, "My soul is bent upon success," and write after it, "I have succeeded."

In Congress, Mr. Stephens took fearless positions upon all great questions. At one time he incurred the displeasure of several Southern politicians by opposing the acquisition of California and New Mexico, and Judge Cone called him a traitor. Mr. Stephens was aroused, and threatened "to slap his face." Demanding a retraction of the threat, Cone met him on a hotel piazza, threw the man scarcely half his size to the floor, and thrust a dirk knife eighteen times into his body, one gash coming within the sixteenth of an inch of his heart. Once, as the knife was aimed at his throat, Mr. Stephens grasped it in his hand, which was literally cut to pieces. He recovered, against the expectations of everybody, and years after, looking at his withered hand, said, "Poor Cone ! I'm sure he'd be sorry if he knew what trouble I have to write with these stiff fingers of mine."

For sixteen years, much of the time a great sufferer, Mr. Stephens continued his honorable and brilliant record in Congress. Meantime the question of Slavery had become an all-important issue. Naturally believing that slavery was legal and righteous, from his life-long education and habits, he yet fought earnestly against the secession of any State from the Union. However, when Georgia would follow the example of South Carolina, he felt it his duty to stand by the State which had so long honored him with important trusts. He was made Vice-President of the Southern Confederacy, yet so anxious was he that a reconciliation should be brought about, that he, with two other Southern men, met President Lincoln and Secretary Seward at Hampton Roads in 1865, for a conference ; but no terms could be agreed upon. At the downfall of the Confederacy, when urged to go abroad rather than be imprisoned and perhaps executed, he replied, "I would rather die in this country than live in any other. I will remain and accept whatever fate has in store for me."

He was soon after taken, a prisoner, to Fort Warren, Boston, where he remained some months, treated, however, with kindness and respect ; for

the North heartily honored a man who could say, "*I never departed from principles—I NEVER SHALL.*" He was above bribery. "When I went to Congress," he said, "I made a covenant with myself, signing it the day before I took the oath of office: 'Except my pay, I will never make a dollar in Washington, while a member of Congress.' I have collected for others, I suppose, half a million of dollars, and I would never take a cent of it."

While in Washington, a lady called upon the great lawyer, asking his aid to save an imperilled estate belonging to herself and three daughters. He befriended her, chivalrously, and when she offered to pay him, he refused it, but reminded her of having given a "cup of cold water" on an August day to a lad who was walking forty miles to college! She was astonished to learn that the weary lad and the famous lawyer were the same person.

During all these years of anxiety and excitement he wrote almost daily to Linton. Now it is of mighty matters of State, now he tells of the illness and death of his pet dog, Rio:

He sleeps at my feet in the day, [Mr. Stephens was ill], and at night before I go up stairs to bed. . . . During the night he repeats his visit several times. Poor fellow, he is blind. He barks incessantly if I leave him. He keeps close after me and follows the sound of my feet. I usually carry a cane, and let that drag along behind, for him to hear it more distinctly than he can my tread. I find more pleasure in thus exercising Rio, and witnessing the pleasure it affords him, than I ever did in the enjoyment of all the honors this world has ever seen fit to bestow upon me. . . .

It is all over with poor old Rio. His strength failed just at my room door, then he fell and died without any struggle. He lay in the library all night. Next day he was put into a box or coffin, and buried in the garden. Over his grave I shed a tear, as I did over him frequently as I saw nature failing.

After the war he wrote his *Constitutional History of the Rebellion*; it was able and candid. He received from the sales, thirty-five thousand dollars. Four years of this time, afflicted with inflammatory rheumatism, he did not leave his house. He wrote often in great pain, while propped up in his bed by pillows. Invited now to the Professorship of Political Science and History in the University of Georgia, he was obliged to decline. But during this seclusion at his home in Georgia, which he called Liberty Hall, "because," said he, "I do as I please and all my guests are expected to do the same," he had five law students in his office, to whom he made no charge either for books or instruction. During his life he aided over one hundred and twenty young men and women to go through college, a large number of whom entered the ministry.

And now came a great personal trial in the death of his brother Linton, who had become a prominent lawyer. Mr. Stephens said bitterly, "The light of my life is extinguished. Why am I here hobbling about and Linton gone?"

He was soon after elected to the United States Senate. None of us who have seen him seated in his chair on wheels before the Speaker's desk—for he could not walk, save with two crutches and but feebly with them—will ever forget that pale sad face, those clear, brilliant eyes; his great mind and his emaciated body. When Carpenter's picture "*Signing of the Emancipation Proclamation*," was given to the Government by the beneficence of a woman, Mrs. Elizabeth Thompson, who paid twenty-five thousand dollars for it, he who had been the Vice-President of the slave-holding States, was asked to make an address in conjunction with General Garfield; and eloquently did he speak of Abraham Lincoln, and of the future of a reunited country.

Yet once again Georgia longed to show her pride in her favorite son; and in 1883 he was made Governor. Savannah soon celebrated the one hundred and fiftieth anniversary of the coming of Oglethorpe, and Mr. Stephens, now seventy-one seated in his chair, brought in glowing review the history of the State, before the assembled thousands. But the effort, the excitement, the enthusiasm, was too much, and on March 4, he died at Liberty Hall. Governor Stephens' last official act, after fifty years of service, was to grant a pardon.

Nearly eighty thousand persons gathered to look upon the beloved leader as he lay in state, at the Capitol. The flowers brought by friends covered numerous tables, and the roller-chair, now vacant, was hung and cushioned with their beautiful bloom. Throngs of the colored people walked many miles to look upon the man who had always treated them with protective kindness. A dozen bands played the "Dead March" and thirty military companies headed the procession, two miles long, to the grave. At sunset they laid the Governor to rest, and just as one bright star came out, the great, silent company departed.

The general mourning, the sense of loss and bereavement will linger with the present generation. The people at large loved him! The small man was their hero. He furnished them with an ideal. His kindness could no more be hidden than the sun. Like the sun, it shone for all. Some one said to him, "Governor, I am told you keep a room for tramps at Liberty Hall."

The reply was characteristic: "Yes; I feel it my duty to try to make everybody as happy as I can."

WAYS TO DO THINGS.

BY CHARLES M. SKINNER.

XXIII.

HINTS FOR YOUNG PEDESTRIANS.

IF I could inspire ten wide awake boys with a fondness for pedestrian exercise I should be quite satisfied to jot down some hints on walking tours suggested out of an experience of many excursions, aggregating several thousand miles of walking.

A self-reliant lad, of good constitution, should be able to get along by himself for a week or two, and to find his way through almost any part of the United States without other assistance than civil speech and a small map; and if he is not a self-reliant lad I know of few things that will do more to develop his pluck, and cultivate a habit of thinking and acting for himself, than walking. Mind, I do not mean walking about a sawdust ring with the object of scoring a higher number of miles than some other contestant; that is a degradation of natural powers, and is not likely to benefit body or mind, for nerves and muscles are kept on a strain that often produces bad effects when the walk is over, and in plodding over dull ground or empty floors the thoughts are tied down to the work and the surroundings instead of being free to roam, as when the walker is in open air and in the midst of beautiful scenery.

In the first place, you want at least a week for your trip. If you have more time to give you will be in better trim the longer you walk, as you should aim to increase your distance a little every day. Many people unaccustomed to long walks are exhausted by a ten-mile tramp, but by beginning, say with seven or eight miles, and increasing a mile or so daily, walkers become able to pace off forty miles a day and be none the worse for it. The object of a pedestrian trip is not, however, to ascertain how much or how fast you can walk, but to see the country, gain new experiences, and enjoy yourself. Of course, in order to do this you must attain a reasonable degree of speed and endurance, otherwise you will find walking a poky affair. To find yourself at night near the place you left in the morning is discouraging, for you will begin to consider life too short to see much without the assistance of horses and railroad trains.

Lay out your route before you start, calculate your expenses, and supply yourself with money enough to meet them as well as to provide for contingencies. Arrange for the reception of letters

at various points, allowing two days between the time of writing and of receiving for distances over one hundred and under five hundred miles from home. By planning your trip before starting, as you may with the aid of maps and guide books, you will know exactly what you are undertaking and will avoid mistakes and confusion. Be sure that you know where you are going and that you are posted as to the points of interest along the line of march.

Do not cumber yourself with useless luggage. If you carry more than three or four pounds of "traps," you will be tempted to turn about and take them home before you have been more than two hours on your journey. If you intend to camp out every night you must be content to go heavily weighted and to put up with many discomforts. You will sleep cold, you will get wet, you will be obliged to carry a tent, hatchet, pan, pot, cup, knife, fork, spoon, and some provisions, and you will be inclined to doubt if the fun equals the trouble, unless you accompany a jolly party and have the whole summer before you. Here is my whole equipment for tours of any length; it is all I took on a trip across the continent, and were I to visit Europe I should add nothing to it:

(1) A soft leather satchel, about ten by twelve inches, slung from the shoulder by a strap. It contains (2) a gossamer rubber overcoat, (3) a nightgown, (4) a collar, (5) a neck-tie, (6) a guide-book, or map, (7) postal cards, (8) comb, (9) toothbrush, (10) "telescope" cup; and room is still left for packing small minerals or photographs of places that I visit. In my pockets I carry (11) a watch, (12) sketch book, (13) pencils, (14) knife, (15) diary, (16) toothpicks, (17) handkerchief, (18) money, (19) and a book for reading during bad weather and at inns in the evening. I also carry (20) a stout cane, which gets to be a companionable sort of thing, and may be of service as a weapon. It is worth carrying for the sense of protection you receive from it, if for no other reason. The rubber overcoat is indispensable in showery weather. The nightgown should be indispensable to everybody, for it is unhealthful and uncleanly to wear the same clothing day and night. Even when compelled to sleep in barns — and there are worse beds than a hay mow — I laid aside at night every vestige of clothing worn during the day, allowing it to air and dry thoroughly until morning. It is a luxury to slip out of your dusty clothes, damp with perspiration,

and pleasant to find them fresh and serviceable when you awake. Clear water is the best adjunct to a toothbrush in the care of the teeth. Soap and towels you find everywhere, so there is no need of taking them. By all means carry a note book, or diary, and make a daily jotting of your distances and adventures. Though you write but five or six lines a day, those little hints will serve in after years to strengthen memories of what will probably be classed among the happiest days of your life. So with the sketch book. The roughest and hastiest of my sketches, though of interest to nobody but myself, calls up a hundred circumstances and puts me back among the hills in a twinkling. Be earnest in your sketching, and let your drawing, although but an outline, be as true as you can make it. My sketch book is carried in a large pocket inside my coat.

Now as to clothes: It is plain that you should not set out upon a two-hundred-mile walk dressed in broadcloth, kid gloves and patent leathers. Take your every-day suit, see that all the pockets are sound and the buttons sewed on tightly. Be sure that your shoes are thick-soled, well oiled and broken in and, if you are going to climb mountains, tell the cobbler to put soft iron nails into the heels instead of hard iron or steel, for the latter become smooth and slippery, making your footing unreliable on steep ledges. There is no need of suggesting that you may paddle about barefooted, now and then. As you are boys you will certainly do that before you have been a day from home; but take smooth roads for it. Bathe your feet every night, and if they are a little tender put soap on your stockings. You will see from my inventory that I carry no stockings except those that I wear. It is more convenient to wear out the pair you start with, washing them now and then, than to carry extra ones. When they are no longer serviceable throw them away and buy new ones. You may buy them at country stores for fifteen cents. Wear a flannel shirt with gauze underclothing next to the skin. Let the shirt be one of those convenient arrangements with a rolling collar that you can turn down your neck on state occasions, placing over it a linen or paper collar, and a scarf. As the collar and tie conceal all traces of the shirt, nobody knows that you are not arrayed in the finest linen. How do I get my shirt washed? In this way: my nightgown is arranged with collar buttons, and I conceal the front with the collar and scarf, wearing it in place of my shirt while the laundress is scrubbing the dust out of that garment. Flannel shirts need washing but seldom where underclothing is worn, a good shaking often sufficing to get the dust out of them. The nightgown, collar, handkerchief and underclothing should be washed and ironed for you within eight hours, if you make the laundress understand that you can wait no longer for them.

You will find it so difficult to organize a pedestrian party that you may as well make up your mind at the outset to go alone. For a day or so you may feel the lack of company, but it will take only a short time to accustom yourself to it, and you will find great delight in the absolute liberty you will enjoy. I have never succeeded in finding a companion for a longer excursion than twenty-five miles. No matter what plans are made in advance, at the last moment one pedestrian finds himself up to his ears in business, another has a sore toe, and another has paid his tailor's bill and hasn't a dollar left. I have long given up hope of walking in company, but one is seldom lonely where nature is beautiful, and there is always enough to think about without talking. Even in seemingly well-assorted parties if one of the number proves to be lazy, or sulky, or dissents from schemes in which the majority concur, or can not walk fast, or wishes to linger in uninteresting places for selfish reasons, or is always expressing dissatisfaction with the route, or complains loudly at the little privations of travel that should be subjects of merriment instead of melancholy, or has some hobby that he indulges, to loss of interest in his walk, or is vulgar or vicious in his talk or habits, the whole trip may be spoiled. There should be in a party the cheerfulness, delight in nature and singleness of purpose that you would feel alone, and it is difficult to find this, for wherever people are assembled together, differences of opinion arise.

Supposing you have started upon your tramp. The sun shines, flowers and foliage sweeten the air, birds sing in the wood yonder, the brook bubbles its cooling music beside the road, the distant hills are clear and blue. Very likely you have seen the landscape hundreds of times before, but it has a new charm now, for you are, perhaps for the first time in your life, absolutely free. Steal into some cornfield by the wayside and stand on your head for a few minutes to relieve the immense enthusiasm that this feeling is certain to awaken, and resume your walk. You have eaten a hearty breakfast, and your appetite is, no doubt, healthy enough to fill your landlords with some anxiety when you begin your depredations in their dining-rooms, but do not eat a big dinner at noon. If your means are limited you can not afford it, if your time is limited the hour you will spend at the table will be a heavy sacrifice, and if your stomach is heavily loaded you can not walk as blithely as you did before dinner. Take your heartiest meal later in the day. At noon, or thereabout, knock at some farmhouse door and ask for bread and milk. You will receive enough for three, your bill may reach fifteen cents, but it is more likely to be ten, and you will be in better trim to continue the walk than if you had been eating meat, vegetables and pie. I have often obtained lunches at farmhouses

that were almost equal in variety and abundance to a regular dinner. Here is what a man in the Catskills once set before me, after apologizing for the emptiness of his pantry: cold meat, preserved fruit, cake, bread, pot-cheese and fresh cider. Now guess the amount of his bill. Thirteen cents! Don't be bashful about asking for bread and milk, at least in any farmhouse of respectable size and appearance. It is the one thing sure to be found, it is nourishing, and though the charge for it, if one is made, is so low that you feel compunctions of conscience for not paying it twice, remember that money goes farther than in town, while the lunch costs your worthy host the merest trifle. For dessert, help yourself to fruit and berries from the wayside. If benighted, storm-bound, or astray, you will have little difficulty in getting the good farmer folk to give you a lodging over night, offering to pay them, of course, for their trouble. They will perplex you somewhat with their curiosity, but if you talk cheerfully and frankly they will like you and your stay will be pleasant.

Unless you are well supplied with money do not stop over night in cities and large towns upon your route. Arrange your trip so that you can pass through them and put up at the tavern in a village beyond. Not in the suburbs, for there the hotels are wretched, but in some country settlement; there the beds will be clean, the tables well-supplied, the charges will be moderate, and you will not be compelled to "dress up" to an alarming extent, on account of the company you will meet. Always ascertain the amount of your bill in advance. If you are compelled to stop in a city it will be wiser, unless your stay is of several days, to engage rooms and pay for only such meals as you have, than to lodge in a pretentious hotel where you pay full day's board if you are there only two hours. Should you lose your way, or find yourself belated and compelled to spend the night in the open air, contrive some sort of covering to keep off the dew. A tree is better than nothing. Do not light a fire unless the night is cold, for it will attract bugs, moths and flies by hundreds; but if you do light one, sleep with your feet towards it and make sure that nothing in the vicinity is likely to catch the flame. I doubt if your first night on the ground be passed in very sound sleep. You will better enjoy thinking and telling about your experience afterward than undergoing it at the time. Mysterious murmurs will be heard in the branches, soft foot-falls and gliding noises will come from thickets, night birds, crickets, katydids and frogs will talk persistently, now and then you will start up prepared to affirm that you heard a whisper, you will wonder if there are snakes, skunks, weasels and rats in the vicinity, and it may be some hours before you realize that the queer noises are only produced by wind and harmless insects; then your

tired head will sink upon the grass, you will thrash about and partly wake at intervals, and will presently sit up to rub your stiff elbows and discover that it is morning. Before lying down, remove all hard things except watch and money from your pockets, as they will press into your flesh when you lie upon them, and hurt you. Then turn up your coat collar and button your clothing well about you for dew will fall and the night be chilly. If your hat or cap is too good to sleep in, tie your handkerchief about your head. Ease your feet by partly unlacing or unbuttoning your shoes, and be sure that your shirt is not tight about the neck. Use your satchel, or nightgown, as a pillow, your rubber overcoat as a blanket, a heap of grass or leaves as a mattress. You will rest more comfortably if you will make a hollow in the ground about three inches deep, for your shoulder to slip into, and another like it for the hip. I don't recommend sleeping out of doors "for fun." I have tried board floors, wagons and freight cars, and have found them, with a little dressing of weeds and grass, pleasanter beds than bare ground.

As to a "stamping ground," all parts of the country offer attractive pedestrian routes, though I should fancy that the plains and prairies might become monotonous to the walker. Among regions favorable for walking, I can, from experience, recommend the White and Green Mountains, Catskills, the Lehigh region, Hudson, Connecticut, Housatonic, Delaware, Potomac and Shenandoah valleys, the New England coast from Cape Cod to Portland, Western New York and Niagara, and the regions about Montreal and Quebec. These districts are penetrated by railroads and the telegraph, so that in case of accident, sickness, or loss of funds, you could return or communicate with home at once.

The walker may pleasantly vary his route by returning over different roads from those he set forth upon. Here is a sample route, taken from one of my summer tramps: Boston to Alton Bay, N. H., across Lake Winnepesaukee by steamer, Centre Harbor, Campton, Pemigewasset valley, the Pool, Basin, Flume, Franconia Notch, Profile, Echo Lake, Franconia, Bethlehem, Fabyan's, Mt. Deception, Mt. Washington, Crawford bridge path over the Presidential Range to the Crawford House, White Mountain Notch, Bartlett, Glen road and return, Iron Mountain, North Conway, Lake Ossipee, Portland, Salem, Lynn and Boston. It is sometimes practicable to establish one's headquarters in the centre of an interesting region, striking out in various directions from that point. Thus, in the Catskills, the village of Hunter affords a convenient point of departure for Hunter Mountain, Stony Clove, Kaaterskill Clove, Plattekill Clove, South and North Mountains, Cairo, Windham, Lexington and Grand Gorge.

The young traveller who has the entire summer

before him, and a purse long enough to attempt such an undertaking safely, may adapt the following route to his liking by cutting from or adding to the list of interesting points, going over some portions of the country by rail, and perhaps accepting the numerous invitations to ride that farmers, travelling from town to town, extend to people they overtake upon the road. Starting up the Hudson River from New York visit Sunnyside, the home of Irving; Tarrytown and its quaint Dutch church; Sing Sing and the State prison there; the military school and old forts at West Point; Storm King, highest of the Hudson hills; Newburg, and Washington's headquarters; Saugerties, from which point a detour can be made, embracing some of the finest portions of the Catskills, returning to the Hudson River at Catskill village; Albany and the capitol; Troy; Saratoga and its famous springs; Glen's Falls; Fort William Henry; down Lake George by steamer; Ticonderoga and its historic

ruins; down Lake Champlain by steamer, stopping at Port Henry or Essex for a brief run into the Adirondack region; Port Kent and Au Sable Chasm; Burlington; up the Winooski, ascending Camel's Hump and stopping at Montpelier; Wells River; Woodstock, N. H., from which point make a tour of the White Mountains, similar to that just outlined; Boston, or Connecticut valley, to New York. There! Some of the grandest and most beautiful scenery in the world is yours to enjoy upon this trip. Or, if that programme is not sufficiently ambitious, you may omit the walk across Vermont and extend your trip from Port Kent to Montreal and Quebec, descending into the White Mountain region from the North.

The interest of your walk will be much increased if you will glance through the history of the region you intend to explore; or, if you have a scientific turn you might post yourself on the geology, mineralogy or botany of the country.

ANNA MARIA'S HOUSEKEEPING.

BY THE NEXT NEIGHBOR.

XXI.

PLANNING AND PACKING.

THE Lawrence girls have sent over to ask if you will be so kind as to spend the day with them and help in their packing scrape. For Julia is going with her aunt to Mount Desert, and Helen and Florence have just been asked to join the Farwells who start with the Raymond Excursion, Thursday, for California. When I was sixteen it would not have been possible for a woman and three girls to go off travelling where they pleased without an escort of their own family. When aunt Syra and Mary Bates were engaged as teachers in the Female College at Steubenville, next to Wheeling on the Ohio, they had to wait three months till Doctor Beattie, the principal, could come all the way to Boston and back on purpose for them, it was so highly indecorous and unheard-of for ladies to leave home without an escort. Mrs. Lyle, the rich banker's widow, wanted to see Niagara twenty years before she could find a chance to go from Towanda in care of relatives as she thought proper, and then while she was taking three weeks to get ready, she took neuralgia in her head, and never got away from home before the erysipelas set in which ended her uneventful life. And you know how the Van Allen girls and their mother

stayed at home summer and winter all their lives in the big square house with the tulip borders, because they had no brother to take them anywhere and the father was dead. Now, in care of a Raymond party, the mother and girls, or the single lady who boards, or the young school teacher can go from Boston or Chicago to San Francisco, or the Willamette, in as scrupulous escort as their own uncles might be, and much more experienced in the ways of travel. It is like traveling *en prince*, with the best cars and special trains, every detail of baggage, dinners, carriages and hotels provided without care, and courteous cultivated gentlemen in charge, keeping ceaseless watch over the comfort of the whole large party. I am glad the mother, or the aunt, and the girls need not stay at home alone any more, but can buy courtesy and care with a round ticket, and go to see the world as gayly and safely as their brothers and sons do. You may count on a good time if you will make preparation with the same foresight and system which the admirable manager of the route uses in caring for his party four months ahead. Let an old tourist who has taken the journey by excursion and in private party, and who never counts on more than a day's warning to go to the end of the world, help your girls' memories over the bags and trunks.

A well furnished trunk really packs itself, its trays, bonnet boxes, tills and tapes suggesting their

peculiar uses; but all trunks are not so well provided. Never mind. The old one is solidly built, and the joiner can send two light trays with tapes crossing to hold the contents, and nail cleats for them to rest on. A stout pasteboard box, lined with the glazed linen known in tailors' findings, makes a good bonnet box lighter than the French milliners' boxes of wood, and lightness is everything when every pound over the regulation hundredweight is charged for. In event of a smash the wooden box goes to pieces anyhow and the pasteboard one can't do more. Put in the bonnet crown down, and fill it with all sorts of light things, laying an open handkerchief first. Fancy work, and materials, fichus, lisle stockings, folded ribbons, all go in and help keep the shape of the bonnet, which must be tied in by four cross strings of tape attached to the sides of the box just above the bonnet brim. Veils and kerchiefs may fill the corners without crushing the trimming, for a bonnet goes safest in a full box. When you unpack, take the handkerchief out by its four corners, with the contents and the bonnet is free at once. Helen will want it at Manitou anyhow, where one goes to chapel in the shadow of Pike's Peak. Laces, collars, cuffs, go not in boxes, but in those pretty "portfolios" of quilted silk or satin, which lie so smooth and take little room. Boxes, except for spools and buttons, must be tabooed where space is precious. A travelling work-basket of pasteboard covered with chintz, to lie flat when packed, is the suitable thing; so is a thread bag with casings for spools, and skeins, a slipper and shoe-bag, and a collapsible one of enameled cloth for soiled clothes, that will not let them scent the trunk. All provided! Very well. Lay out all that is to go, in orderly piles on the bed, have the trunk close by and a low seat between the two, so that you need not make drudgery of it, for packing and stooping over trunks is very tiresome work to people conscious of having spines in their backs. Don't omit the large sheet of fresh wrapping paper in the bottom of the trunk to catch the dust which works in, somehow. The heaviest things go in first, and these are books. A pocket dictionary, Bible and prayer-book, hand-books of botany and geology as you like, a scrap-book, or rather a portfolio for all the odds and ends of photographs, clippings, leaves, that keep the memories of a tour, will be the essentials of your library. Perhaps you will want Shakespeare and a poet or two beside, but on a pleasure journey it is surprising how little time there is for reading. You will want some good stories to rest your mind when tired with sight-seeing and novelty, but half a dozen "Franklin Squares" strapped with your hand luggage is enough, for you can buy novels anywhere. Take plenty of stationery, for you can't buy linen note paper at twenty-five cents a pound west of the Mississippi, also take small wares to last till you are home again, for the little things we buy for five

cents—spools of silk, linen buttons and boot-buttons, elastic, hair nets, and such—mount up to the inevitable "two bits" or twenty-five cents once you are out of Chicago. I give you one lady's list of inevitables for the overland tour, expected to last three or four months:

Three papers of crimping pins, five of hairpins, five invisible front nets, five hair nets, five yards elastic cord, three papers of pins, three spools black sewing silk, six spools sewing cotton, the same of mending cotton, two dozen boot buttons, one half dozen tape, two dozen linen and pearl buttons, skein linen thread for boot buttons, wax, three ounces vaseline, the same of carbonate of ammonia, dry, one ounce gum tragacanth (for mucilage and bandoline) four ounces gum camphor, one ounce permanganate of potash, the same of pure carbolic acid, the same of citric acid, one-half dozen of toilet soap, one half pound powdered borax, two bottles lavender water, one bottle shoe dressing, one box ink-powder, one of elastic letter bands, one of mouth glue, two pounds thin note paper, envelopes half as many, one-half dozen pencils, two small boxes pens.

This looks like an odd mixture but it is all wanted. The ammonia and borax are to soften the hard water on the Plains for washing hands, the permanganate of potash dissolved in water will soften the skin, heal eruptions and neutralize bad odors, which I grieve to say are too often found about the bedrooms of first-class hotels, or what pretend to be such. You cannot always get lemons, and a tiny crystal of citric acid in a glass of water will give you a morning lemonade which will keep off the biliousness which steals over one in the long journey with its changes of water and food. Of course it is troublesome to take care of one's self, but it is also vexing to be left at the hotel with a tearing headache while all the rest are going up Cheyenne Canyon, or to find yourself half blind with malaria when you want to be enjoying yourself between the orange groves and the drives at Los Angeles. Of all wretched things, to be sick on a pleasure journey is the most out of place and unhappy.

The small medicine case, the toilet water, ammonia etc., belong in the travelling bag, where also you want note book pencils, knife, sketching block and herbal, if you use them, writing tablet with a quire of paper, envelopes and stamps ready, envelopes directed and stamped, beforehand, for writing letters is a hurried business on a journey, and a direction ready may save a post when one is short of time. Have a bottle of shoe polish put up in the bag, for it is good for many things beside shoes. That, the bandoline, and lavender must be carried in a wadded case like an exaggerated spool bag, to prevent breaking, unless you have the olive wood boxes with screw tops which hold bottles so safely, else a deluge of

blackening or ink over one's handkerchiefs is the least to be looked for. Don't forget a small bottle of chloroform liniment, invaluable if toothache, earache or any stray neuralgia comes on. Ask your doctor for the recipe, and never go on a journey without a bottle of it. And Jamaica ginger is a very useful travelling companion that one is sorry to be without.

Better carry your case of bottles forty years and not need it than to be found once without when you want it. A packet of chocolate in some shape, acid drops and fine crackers may be well taken, for distances are long between meals on the overland routes, and I have seen in a "wash out" a train of Pullman passengers on a Pacific railroad absolutely wolfish with hunger, going thirty hours between two eating stations two hundred and fifty miles apart, with the Rocky Mountain range between, and not a stale cracker or stick of candy to be bought on the dreary route. Accidents will happen, and delays are not uncommon, wherefore you will prepare for them like a wise traveller, with plenty of wraps, and at least a day's supply of Albert biscuit, graham wafers, lime drops, sweet chocolate, almonds and raisins, for you get more nourishment in small compass in such things than from a basketful of the inevitable chicken and cake. Have your lunch done up in oiled paper which is strong, neat and takes less room than box or basket. Beside things named, the large travelling bag should hold a print wrapper for sleeping and dressing gown on the train, collars, cuffs and handkerchiefs, two or three pairs of stockings, toilet towels, some with tapes to tie over pillows and give your cheek something nicer than railroad or hotel pillow cases to lie on; slippers, hood, or soft hat, and loose wrap to wear on the cars, for riding all day in walking dress, bonnet and boots makes a journey more tiresome than necessary.

Old travellers who spend this month on the Pacific coast, the next in the Riviera and the next in the Hebrides, and go knocking about the four quarters of the globe, hardly wait to enter a train till they are in negligé as far as propriety allows. I wouldn't quite recommend the style of the English bishop's lady who went with us from Omaha to Colfax, in morning jacket and quilted petticoat, though it was a very nice black satin petticoat and probably quite the proper thing in British eyes. If comfortably dressed to begin, it is surprising how little luggage one needs on the cars. A small valise, with waterproof, shawl and books strapped on the outside, ought to carry all that one lady needs outside of her trunk between Chicago and San Francisco. Dress lightly with thin flannels, for the cars are warm even on the snowy mountain tops, and your cloak and shawl will be all that is needed on the way.

I like to pack the travelling bag early, before the trunks are done, and have it off my mind. Left to the last, one gets tired, and things are

forgotten, or crowded like a pedler's pack. That done and laid aside with travelling dress and cloak, one can give one's mind to the trunks. Books and underclothing go in first, then the dresses in trays, with parasol, bonnet box and small things wedged as closely as you can get them on the top. To have things go smoothly and safely, learn to pack firmly, so that nothing can be shaken about. All nice dresses should go in wide shallow boxes, or be pinned in soft paper or thin towels, to prevent injury. See that all flounces and pleatings lie smooth, and that waists and sleeves lie flat, folded only in their seams. It was easy to give rules for folding dresses when they were made with plain straight skirts, and you had only to divide the skirt into four equal parts, and lay it smooth, but no such thing is possible with polonaises and puffed overskirts. Fold in the seams and across the middle of puffs is all that a dressmaker can tell you. Lay things smoothly with no turning up at the sides of the trunk. If a dress or skirt doesn't fit in, take it out and fold it smaller. If the trunk is too large to be filled snugly, make the compartments smaller by thin partitions of wood tightly wedged in. If your things only half fill the trunk, pack that half as closely as it will hold, and leave trays empty and nailed down to keep the rest in place. The moving about of lightly packed things ruins boxes and dresses together.

Wrap nice books and boxes in towels or thin paper to keep them from rubbing against the sides. Trinkets, or china, should be wrapped in plenty of tissue paper and wedged into ribbon boxes, rolled in towels and tucked among clothes where they touch nothing solid. Lay framed pictures glass down, between layers of clothing. Carvings ought to have separate boxes, and lie bedded in tissue paper, or sheets of wool wadding.

Silk in the piece should never be folded, you know, because it will crack in the creases. Roll it round a paper core, and wrap it in a soft towel or square of thin cotton. Any fabric keeps better in rolls than folded flat. Nice ribbons keep their color best wrapped in thin manila paper, with oiled paper outside, such as caramels are kept in. If you were going to Japan, or the Sandwich Islands, which are the next stage from California, you would want a set of tin boxes, and stout pasteboard ones, lined with thick oiled paper to keep everything in — gloves, ribbons, shoes, silks, cambrics, or the damp would spoil everything. Fancy keeping all your finery in tin cake boxes!

Finish by leaving the things you are likely to need first at the top of different compartments, so that you can lay hands on them without going to the depths of the strata. See that all buckles, straps and hinges are in order, before the canvas cover is drawn on the trunk, and have a stout strap outside of all, riveted on so that it cannot be stolen from baggage rooms, by knavish porters. Have your

initials distinct and clear in black paint, but it is not desirable to have one's full name and address. Pack the little rubber or crash dressing case, a medicine vial or two, handkerchiefs, one small towel, a vinaigrette, notebook pencil and knife in your small handbag, with the red Russia leather book of coupons for the journey, and bon voyage, girls!

This is pretty, to leave you, Anna Maria, a note of thanks on the way to the depot, with tickets for a White Mountain tour in July under the Raymond escort. The next thing will be a dress rehearsal, over your wardrobe for the occasion, and I'm coming over like a fairy godmother, with my thimble in my pocket, and a needle for a wand.

WHAT TO DO ABOUT IT.

EVA T. "I would like to know what Carlyle means by 'gigman.' He uses it in all its forms as 'anti-gigman,' 'gigmatic,' etc. The word is not in Webster's Dictionary."

'Gigman' and its variations were words of Mr. Carlyle's own coinage. They rose very naturally from his acute observation of the conceit, obtuseness and narrow notions common in the lower middle classes, among people of small independent means who could just afford the dignity of keeping a horse and gig. Among people of limited means, the person who can keep a gig is sometimes looked upon as a superior being, in the social scale, and the reverence given their equipage is very apt to extend to their opinions also. In old settled society like that of England or Scotland this esteem of small wealth reaches an absurd pitch, and the influence of this narrow-minded, self-esteeming class is almost despotic in matters of neighborhood interest. Mr. Carlyle's "gigman" is a lower version of Mr. Matthew Arnold's "Philistine," and aptly suggests a person of narrow ideas, ungenerous domineering disposition, and vast conceit. A type — alas! — not unknown in our own country.

A. M. D. Mr. Barnum says that Jumbo is twelve feet, four inches high, and his girth has never been measured, but is supposed to be six feet larger than the largest elephant known. Won't there be curiosity to see the Sacred and Royal White Elephant from Siam which Mr. Barnum has bought, and which spent its winter on the long voyage from its palmy kingdom, its palace home and the devout attendance it has always known?

LILY T. R. wants to know 1. "How to get the curl back into ostrich feathers which have been in the rain?"

Hold them in the steam of fast boiling water, a few moments, then shake them gently over a hot stove or register. Steam and dry them alternately till the vanes of the feather spread naturally, then curl each vane over a dull knife by drawing it between thumb and blade to its tip. The final curling is given by turning the feather part each side the rib over a large curling iron with mild heat,

then steaming and heating a little again. It is very nice work to curl a feather, and two hours is not too much time to devote to a good one. The feather dressers in the city will dress and re-curl a large plume for twenty-five cents.

2. "In a society where a lady is president, is it correct to address her as Miss President?" Lady President is the correct form, and a very graceful one.

The Two Little Girls who can sew well and wish to earn money might hem linen ruffling an inch wide, making the narrowest whipped hems, for which they might get five cents a yard, or they might make large toilet pin cushions of red or blue satin, or of gay French chintz, with ruffled muslin covers, or try their hands at the cretonne baskets described in WIDE AWAKE two years ago.

Will Lou Vernon who inquired for the descriptive poem on the "Rock of Ages," kindly send her address?

A. E. F. Who will give the author of the poem on "Forgiveness," with the lines —

Pass the green threshold of our common grave,
Whither all footsteps tend, whence none depart?

A SUBSCRIBER. "You tell us that sulphate of quinine ointment will make the eyelashes grow. I have inquired of two of the best druggists in Boston, and they do not know what it is, but offered a preparation which they said contained acid. Fearing its effect on the eyes I declined it. Please give the formula for the ointment and oblige." The quinine ointment is not well known, being a French formula, as follows:

Oil of almonds 1-2 ounce;
Disulphate of quinine 1 drachm.

Triturate together in a warm wedgwood mortar till thoroughly mixed, then add prepared beef marrow one and one half ounce, and continue the trituration till cold. Scent may be added. Good for restoring eyelashes, hair, and strengthening the moustache.

THE WISE BLACKBIRD.



TALES OF THE PATHFINDERS.

BY ARTHUR GILMAN.

X.

THE PATRIARCH OF NORRIDGEWOCK.

THE visitor to the library of Harvard University may see, carefully preserved in the "Art Room," a remarkable relic of one of the Pathfinders. It is a small volume, made of sheets of small letter-paper. On the first page he reads the following fading words, traced by the Pathfinder's own hand in the woods of Maine. "*Il y a un an que je suis parmi les sauvages ; je commence à mettre en orde, en forme de dictionnaire, les mots que j'apprens.*" (I have now been among the savages a year; I begin to arrange in order, in the style of a dictionary, the words that I learn.)

These two hundred and thirty leaves, dingy and soiled as they are, carry the mind back to the olden times. It was in the year 1691, that the words I have quoted were traced by the Frenchman's hand under the trees of the wilderness. They tell us of a man of education, for no other would have thought of making a dictionary of the language of the wild Indians. Do they not also speak of a man of patience? Can we imagine the toil necessary for a Frenchman to learn the sounds of a savage language and to trace them out besides the words corresponding to them in his own tongue? They make us ask, "Why was this man of education, this patient and persevering student among the Indians of Maine so long ago?"

History describes the place at which he lived, and tells the story of the patriarch. It is on the banks of the Kennebec river, and is still known as Indian Old Point. Mr. Whittier says:

On the brow of a hill, which slopes to meet
The flowing river, and bathe at its feet —
The bare-washed rock, and the drooping grass,
And the creeping vine, as the waters pass —
A rude and unshapely chapel stands,
Built up in that wild by unskilled hands ;

Yet the traveller knows it a place of prayer,
For the holy sign of the cross is there ;
And should he chance at that place to be,
Of a Sabbath morn, or some hallowed day,
When prayers are made and masses are said,
Some for the living and some for the dead,
Well might that traveller start to see
The tall dark forms that take their way
From the birch canoe, on the river shore,
And the forest paths, to that chapel door ;
And marvel to mark the naked knees
And the dusky foreheads bending there —
And, stretching his long, thin arms over those
In blessing and in prayer,
Like a shrouded spectre, pale and tall,
In his coarse, white vesture, Father Rale !

There we have the neat Catholic church in the wilderness ; its congregation of dark-skinned worshippers ; and their beloved teacher, the Jesuit, Sebastian Rale. I think that, perhaps, the poet gives a less attractive picture of the church than he might, for the Father tells us that it would have been considered very respectable, even by persons acquainted with the elegant edifices of Europe.

It was neat, and for adornments had many conveniences that had been contributed by interested persons at Quebec. Candles, made from the wax of the bayberries that were found in the woods, mixed with tallow, made the little place very brilliant in the eyes of the savages, no less than in those of the Jesuit himself. Forty young Indian converts, clothed in cassocks and adorned with surplices, chanted the processional hymns, and assisted at mass, and, I doubt not there are now in Maine many churches in which there is not so much solemn show as there was in the humble Indian structure at Old Point, nearly two hundred years ago. There are few at least where services are so frequent as they were there then, for the Indians repaired to church twice every day — hearing mass early in the morning, and chanting their prayers as the sun set in the west — while Sundays and saints' days were not sufficient for all the exhortations that

the pastor thought necessary for his flock, and few week-days passed without some formal warning or counsel.

The history of the period is filled with horrid tales of war and butchery, and we cannot read it without a shudder as we think of the trials and sufferings which our ancestors endured for nearly three quarters of a century. The year before Father Rale took up his position on the Kennebec at the place that we now call Norridgewock, "King William's War" opened, and it was not until the year 1763, that the "Old French and Indian War" was brought to a close. All through those years the Indians were looking out for opportunities to attack the Whites, and desolation followed their track as they wandered through the lovely New England valleys marking their route by the smoke of burning homes and the shrieks of wailing mothers and children. As Mrs. Sigourney says :

The red men came in their pride and wrath,
Deep vengeance fired their eye,
And the blood of the White was in their path,
And the flame of his roof rose high.

Father Rale, minister of religion that he was, relates with apparent approval the manner in which the Indians conducted their warfare. He says, "As soon as they have entered the enemy's country, they divide themselves into different parties, one of thirty warriors, another of forty, etc. They say to each other, 'To you, we give this hamlet to devour,' 'To those others we give this village,' etc. Then, they arrange the signal for a simultaneous attack on different points. In this way," he continues, "our two hundred and fifty warriors spread themselves over more than twenty leagues of country, filled with villages, hamlets and mansions. On the day designated, they made their attack at the same time early in the morning, and in that single day, swept away all that the English possessed there, killed more than two hundred, and took five hundred prisoners, with the loss, on their part, of only a few warriors slightly wounded. They returned from this expedition to the village, having each one, two canoes loaded with the plunder they had taken."

If the English could have read the letter in which these words occur, they would have felt that the Father who seemed to be so solicitous for the spiritual improvement of the Indians was not a very good neighbor to have to the northward of their settlements. Though they never saw it, they had other reasons for suspecting that the Frenchman instigated the Indians to some of their wars, and they at last declared him to be an enemy who had forfeited his life by encouraging the destruction of so many lives.

The world has learned much of mercy and humanity since those days and it is hard for us to believe

that any one could be so cruel and hardhearted as to speak in praise of the acts of those who burned peaceful villages at midnight, murdered and scalped their inhabitants and carried off the women and children to a painful captivity; and yet we can read on the pages written by the French at that time commendations of these acts as brave and beautiful! The war that began in 1689 in Europe between England and France was communicated to the colonies, and in America it became a war between Protestants and Catholics, for the French were all of the same church to which Father Rale belonged. We have read how the whole of the West and Northwest was taken possession of by the French, and we know how the Jesuits went everywhere preaching and binding the Indians to their nation. Thus it was that the struggle all through the Indian wars was an attempt on the part of both French and English for the mastery of the American continent as well as a war of religion.

The conflict began at Dover, New Hampshire, then called Cocheco, by an attack upon an old man named Waldron, against whom the Indians had good cause to be incensed because thirteen years before he had entrapped two hundred of them and sent them to Boston to be sold as slaves. From this we see that the treachery and cruelty were not all on one side. Would you like to hear of the treachery of Colonel Waldron? It was in the year of 1676, after King Philip's War, as it was called. The Indians of Maine and New Hampshire had been making depredations on the white settlements and Waldron was sent to arrest the guilty ones and make a treaty of peace with the others. He was well-known and had the confidence of the savages. The Indians came to him for protection, and he proposed a sham fight. When they had emptied their guns, he caused them to be surrounded and made prisoners. And it was a very shameful thing for a civilized man to be guilty of.

After the colonists of New England had become well satisfied that Father Rale was one of the causes of the Indian raids upon them, they made a number of attempts to capture him. One of these occurred in 1721, but he was forewarned and escaped. His church and his dwelling were pillaged, and it was at this time that his dictionary was carried away with other papers which were kept by him in a "strong box." The box was preserved for a number of years in the rooms of the Massachusetts Historical Society, at Boston. It was of curious and complicated construction, and contained in the lower part a secret drawer that was so well hidden that one could hardly open it without breaking the box, unless, indeed, he had learned the secret. On the inside of the cover were two rude engravings representing the scourging of Jesus and his crowning with thorns.

Rale thought that his escape at this time was

little less than a miracle, for most of the Indians were away hunting and he had with him only the old and feeble. Two hundred persons were in the attacking party. Their coming was discovered by two young Indians, who hastened to give warning. Rale hastened to plunge into the woods with the old men, the women and the children. The English arrived at nightfall, but went away and returned the next day, when they advanced almost to the place of retreat. Rale had only time to rush behind a tree, and though it was stripped bare of its leaves by the wintry winds, it sufficed to screen him, and the English, after coming almost up to it, gave up the search and went away. They returned to the little village and plundered his house and church, carrying off the treasures that I have mentioned. It was a time of great trial to the patriarch, for he was surrounded only by Indians or unfriendly whites. The former could do little for his comfort, and the whites did not care to encourage him in his life at Norridgewock. He nearly perished of famine before his friends in far-away Quebec could hear of his trouble; but at last relief arrived, and he went on with his work of teaching the Indians and of encouraging them in their allegiance to the French and enmity to the English.

The Indians were thoroughly aroused against the English, and the next year the war song went from one tribe to another; a conference of the chiefs was held at Norridgewock, and in the merry month of June, a company of the dusky warriors fell upon a village of the whites and carried off nine families. The village of Brunswick, too, where Bowdoin College is now, was burned to ashes, and it was evident that the Eastern tribes were intent upon concerted violence. It was under these circumstances that the English determined that stern measures were needed, and a declaration of war was made July 25, 1722. A struggle of three years' duration ensued, known as Lovewell's War.

The Indians were sure that it was not safe for Rale to remain at Norridgewock, and often urged him to go to Quebec where he would be secure, but he always replied, "Nothing but death shall separate me from my flock." He was as determined as a martyr, and remained at his post, until he died there, as we shall see. It is not pleasant for me to go over the stories of blood-shedding that fill the pages of the historians of the Indian wars, and I doubt not you will be glad to have me shorten this tale. Once a body of men entered the town in the midst of winter, and found that the place was deserted, though some papers were discovered that had been apparently overlooked. Captain Moulton, who commanded the troops, would not suffer any harm to be done to the church or other buildings.

The final struggle came on the twenty-third of August, 1724, when a party of eleven hundred marched against Norridgewock. There were fifty warriors in the village but they did not know that a force was coming until its arrival had been announced by the whistling of bullets. Then they rushed out to protect the aged and the women in trying to make their escape to the opposite side of the river. Father Rale, too, appeared, and the shower of musket shots put an end to his long life. His death threw the whole body of his followers into consternation and all fled in confusion over the river and into the deepest thickets of the woods. There they rallied for a while, but the English did not long pursue. They returned to burn the village, after which they retreated, and the Indians entered to mourn over the smoking ruins and to shed tears over the body of their Patriarch, and over those of their own chiefs, Mogg Megone, Bomaseen, Carabasset and others. The Norridgewock tribe was blotted out, and never again did it appear among the antagonists of the white men.

It is interesting to read in connection with this story the poem of Mr. Whittier, entitled *Mogg Megone*. In it we have a picture of the village as it appeared to some wandering Indians after the devastation of the war.

No wigwam smoke is curling there;
The very earth is scorched and bare;
And they pause and listen to catch a sound
Of breathing life, but there comes not one,
Save the fox's bark and the rabbit's bound;
And here and there on the blackened ground,
White bones are glistening in the sun.
And where the house of prayer arose,
And the holy hymn at daylight's close,
And the aged priest stood up to bless
The children of the wilderness,
There is nought save ashes sodden and dank,
And the birchen boats of the Norridgewock,
Tethered to tree and stump and rock,
Rotting along the river bank.

Thus we have traced the story of the life and death of the Patriarch of Norridgewock, a man who was devoted to the cause that he had espoused and who died at the post of danger. His acts and his motives have been differently judged; but there is no doubt that he was a strong partisan, that he had espoused the cause of the Indians and of the people of his own nation against the English, and that he entered into the struggle in which he was killed, well knowing that his life was at stake. Still, there is a pathetic interest in the story.

The spot on which Rale is supposed to have fallen was at first marked by a cross, but in 1833, a stone monument was raised to his memory, in the midst of a great concourse of people, with much ceremony, on the anniversary of the sad fight.

IN CASE OF ACCIDENT.

BY DR. D. A. SARGENT.

X.

THE BRAIN. (*Continued.*)

DURING the summer months the most common and serious disturbance of the brain is caused by

SUNSTROKE.

The affection that is usually described under this term, may be the result of intense heat from any source; it frequently arises from long-continued exposure to the artificial heat of foundries, bakeries, laundries, etc., also from close confinement in ill ventilated rooms. But the circumstance under which sunstroke most frequently occurs, is direct exposure to the sun's rays.

The condition of the individual at the time renders him more or less liable to sunstroke. It has been found that those who are intemperate in eating or drinking, and those who are suffering from general debility, or are exhausted by anxiety or by overwork, are those most likely to be afflicted; while those who are temperate in their habits, and are in general good health are far less liable to sunstroke.

In all cases the peculiar constitution of the individual will influence the nature of the attack. In the full-blooded the effect will be of an apoplectic nature; in the nervous, it will be of the convulsive; in the feeble, and in those wanting in blood, it will resemble a fainting fit.

Sunstroke sometimes occurs suddenly, but it is more commonly preceded by well-marked symptoms, such as violent pain in the head, and a sense of pain and weight at the pit of the stomach. Inability to think, irritability of temper, disordered vision, and difficulty in breathing, are also symptomatic of sunstroke.

The face gradually assumes a livid, bluish tinge; the breathing becomes short and quick, or slow and sighing; the skin is very dry and hot, or else bathed in profuse perspiration, and the beating of the heart is weak and rapid, and frequently fluttering.

All of these symptoms gradually become more marked and intensified. Power of motion is lost, insensibility follows, and unless relief is speedily furnished death soon results.

The reason that heating the head or body, should produce consequences so disastrous, has never

been determined. It is supposed that the conditions of the blood are changed, so that this fluid no longer nourishes the functions in the brain that control respiration and circulation.

Death occurs from sunstroke through inability of the heart and lungs to perform their office, and the person dies from asphyxia (animation suspended) as surely as he would if drowned or suffocated.

This fact should be borne in mind in attempting to administer relief.

TREATMENT.

As soon as a person is known to have an attack of sunstroke, he should be taken to some cool, shaded place. The ground or pavement, unless heated by the sun, are generally preferable to an indoor couch. To insure fresh air, avoid crowding around the spot. This is of the greatest importance. Place the patient on his back with the head slightly raised. Loosen the clothing about the neck and chest, having first removed all outer garments. Send for ice at once, and order it broken into fine pieces and thrown into a pail. Add a half-pail of water to the ice, and dash the remainder upon the face and chest of the sufferer. While the ice is melting continue to dash water on the head, neck and chest, in profusion. If water can be obtained already iced, so much the better.

If the surface of the body remains hot, wrap a piece of ice in a cloth and rub the body with it and lay cloths, saturated with iced water, on the neck, chest and wrists, all the time continuing to dash water, a cupful at a time, upon the face and head. As soon as the temperature of the body is lowered perceptibly the application of ice water may be diminished.

When the face becomes pale and the surface of the body grows cold, cease the wet applications, remove the patient to a dry spot and rub him thoroughly dry.

In *all* cases of sunstroke cold applications are useful at first. Their continuance, however, and the after treatment must depend largely upon the nature of the case.

If apoplectic in its tendency, the face and neck will be dark, and the veins swollen. The breathing will be heavy and loud, and the heart will beat hard. These are bad symptoms, and call for the immediate aid of the physician. In the meantime the most serviceable thing you can do is to raise

the head slightly and keep the head and chest drenched with cold water as previously directed.

If the case is of the nature of a fainting fit, the face will be pale, the respiration feeble, and the action of the heart faint. In this case cold water is of service, but should not be used in profuse quantities. It might better be sprinkled or splashed over the face and chest, at short intervals, in hopes of exciting the respiratory muscles to activity. Attempts may be made to revive the patient by the use of smelling salts, or the aromatic spirit of ammonia, giving ten to twenty drops at a time, in a tablespoonful of water until forty drops in all have been taken. Other stimulants might be given under the direction of a physician, but as they might prove disastrous if administered in an apoplectic case, it would be dangerous to take any chances. Artificial respiration (*see next chapter*) may be resorted to in cases where the breathing has ceased.

PREVENTION.

As so little can be done to relieve a bad case of sunstroke, a few words as to its prevention, may be useful.

As previously stated, the condition of the individual and his circumstances have much to do with his liability to sunstroke.

Alcoholic beverages tend to heat the blood and benumb the sensibilities, and in this way they render a person more susceptible, and more liable to sunstroke.

Eating excessively of stimulating food, or drinking large quantities of cold water (either at or between meals) during a long period of hot weather, lowers the general tone of the system and is apt to bring on prostration. Let the diet be light and simple during the heat of summer.

The want of fresh air is another aggravating cause of sunstroke. Avoid crowded rooms and thickly settled neighborhoods during hot weather. Get into the country or by the seaside, if only to

sleep. If confined to the city take a sponge bath night and morning, and exercise as little as possible during the middle of the day. Wear light, loose clothing. If of only one thickness, flannel is preferable. If obliged to work in the sun, wear a thin straw hat with plenty of ventilating holes in the top and side. A cabbage leaf, or piece of sponge moistened with water and placed in the top of the hat, will afford relief to the head from excessive heat. If driving on a sunny road, or engaged in work upon a roof, or under circumstances where the rays of the sun fall directly on the top and back part of the head, it is well to cover the back of the head and neck with a wet handkerchief. If this can be pinned in the hat and allowed to drop down behind so as to admit a current of air beneath, so much the better. It will tend to protect an important part of the head, the base of the brain.

Do not be afraid of perspiration, as this will afford relief. On the other hand if you feel uncomfortably warm and do not perspire, a little exercise, followed by a cool sponge-off, is an excellent means of allaying a feverish tendency.

It has been observed that conquering armies in a tropical climate suffer less from sunstroke than defeated armies. As mental depression predisposes to sunstroke this may account for the fact as recorded by military surgeons. Low spirits, anxiety of mind, emotional disturbances, etc., do undoubtedly exercise a depressing influence over the general vigor of the body. Under these circumstances the individual is more likely to succumb to unfavorable conditions. Get your regular sleep under best circumstances possible.

If you find it difficult to sleep at night, let the cool bath be somewhat prolonged, and darken the windows so that you may sleep longer in the morning.

Let the first indication of a headache or general uneasiness put you on your guard, and keep you from further exposure until the heat abates, and the bad symptoms disappear.

LITTLE BIOGRAPHIES.—HOW SUCCESS IS WON.

BY SARAH K. BOLTON.

X.

THOMAS A. EDISON.

ONLY a few are remembered in the history of a nation; these, because they have been associated with some great event, or have given forth

some thought helpful to the world, or have called into form some universal benefit. The name of Lincoln shall endure because he freed four millions of human beings; the name of Faraday, who though elected to seventy scientific societies, and offered nearly a hundred titles, said he "would remain plain Michael Faraday to the last;" of Morse,

because he rendered the telegraph practical, after years of disheartening hindrances; of Stephenson, because he wedded nations by his railroads; and of Edison—he already ranks as one of the world's few great and original inventors.

Like Garfield, like Grant, General Sherman, Howells, and many another prominent man, Thomas Alva Edison comes from Ohio. Like the majority of those who have gained renown, his life has been a battle with poverty; one long work-day, with little recreation, no leisure. He was born February 11, 1847, in Milan. In this small canal town there was nothing whatever to inspire a boy with dreams of usefulness and greatness; yes, he had one help—a loving and ambitious mother. She had been a conscientious schoolteacher; and for her son, her chief desire was that he should love and long for knowledge. His mind was quick, inquiring, experimental, dwelling upon detail. One evening it is humorously related that the parents missed their six-year-old boy. Search was made everywhere. At last, he was found in the barn, sitting on a nest of goose eggs, his dress-skirt spread out to keep them warm, in the hope of hatching some goslings. He had placed food near by, that he might remain as long as need be at his task. He had witnessed, it seems, the surprising results obtained by the sitting of the mother-goose, and saw no reason why he could not accomplish the same. To his regret, the nest was broken up by his amazed parents, and the young incubator quickly transferred to the house.

He had only two months at a regular school. His father and mother were his teachers, the former paying him for every book he read, in order to encourage him. The boy needed little stimulus, however, for he devoured every volume which came within his reach. At ten he was deep in Gibbon's *Rome*, Hume's *England*, Sears' *History of the World*, the *Penny Encyclopædia*, and had also read several books on chemistry. Especially did he enjoy reading of great men and their deeds. His play was in the direction of building plank roads, digging caves, and exploring the banks of the canal.

At twelve it became necessary for him to go out into the world to earn for himself; a mere child, he was; but all the same he must encounter roughness and selfishness in the eager rush for money. He obtained a place as train-boy on the Grand Trunk Railroad in Central Michigan; selling apples, peanuts, song books and papers. With his sunny face and his natural insight into business, he soon succeeded to an extent that he had four boys working under him, in the fig, vegetable ivory, and prize candy trade.

This was not sufficient to occupy his energies, however. He had not lost his interest in chemistry. He found or made an opportunity to exchange some of his papers for retorts and other simple apparatus, and to procure a copy of Fresenius's *Inalitative An-*

alysis, and then he proceeded to turn an old baggage-car into a laboratory. Here he used every spare moment in experiments, which were much to his wonder and delight. For fear that somebody might touch his chemicals, every bottle was labeled "Poison."

Another business was soon added to our train-boy's list. Three hundred pounds of old type were purchased from the *Detroit Free Press*, and with a little knowledge of printing, gained by using his eyes when buying his papers, he started a brand-new three-cent paper, called the *Grand Trunk Herald*. This journal was twelve by sixteen inches in size, and it was filled with railway gossip, changes and general information all likely to be of use or interest to travellers. The literary matter was contributed by baggage men and brakemen. So popular did it become, that George Stephenson, builder of the great tubular bridge at Montreal, ordered an extra edition for his own use. The *London Times* spoke of it as the only journal in the world printed on a railway train.

These enterprises came to grief in a singular manner. The jolting of the car tumbled a bottle of phosphorus to the floor, setting the compartment on fire. Of course all was in confusion, at once. The conductor rushed in, threw all the chemicals and type out of the car, and gave the young chemist a "thrashing." A "sadder but a wiser" boy, he gathered up the few scattered materials which remained and put them in the basement of his father's house at Port Huron, Mich., whither the family had moved.

In a short time, however, he was issuing another small journal, called *The Paul Pry*, but larger and finer than the *Herald*. Soon a contributed article gave great offence to a subscriber. The indignant man shortly after met the editor on the margin of the St. Clair river, and without ceremony, picked him up and threw him in. Being a good swimmer, Thomas safely found his way out, but with his ardor for editorial pursuits forever dampened. During the four years in which he was train-boy, he had earned two thousand dollars, giving it all to his parents. He had slept at home nights, a great help for any boy in keeping his good habits. At the Detroit end of the line, as often as possible, he had visited the library, at one time making the laughable decision to read the thousands of volumes in course, just as they ranged on the shelves. After reading a space fifteen feet in length, which included Newton's *Principia*, Ure's *Scientific Dictionaries*, Burton's *Anatomy of Melancholy*, he concluded that a man must needs live to the age of Methuselah to read a library through, and he gave up the plan. He now took up *Les Misérables*, which he has read a dozen times since then, Jules Verne, and whatever especially pleased him—a natural rebound.

During the early part of our civil war, when he was fifteen, he conceived the idea of telegraphing

the head lines of his papers to the next station, that by thus whetting the appetite, passengers would be led to buy. It was not only a good business scheme, but it served to develop more and more his interest in the wonders of the telegraph. He finally bought a standard work on electricity, and presently the basement of the Port Huron house had other attractions and recreations than a printing press. Common stove pipe wire was strung across and out of the room, connecting with the residence of a boy friend. This wire was insulated with bottles placed on nails driven into trees. The magnets used were old wire wound with rags, with a piece of brass serving as key. If the other children had been like the irrepressible Thomas, the Port Huron house would not have held them, but the mother, proud of anything that looked toward knowledge in action, counted neither old bottles, lines of wire, nor presses as nuisances.

And now an act of heroism made a turning point in his life. The station agent who was also the operator, at Mount Clemens, near Port Huron, had a little boy two years old, who one day crept on the track before the incoming train. Quick as thought, young Edison rushed on the scene, and, periling his own life, of course, saved that of the child. In gratitude, the father offered to teach the boy the art of telegraphy. This seemed a great boon, and after laboring all day each night on reaching home, Edison would return on the freight train to Mount Clemens to study at his new work. In five months, though hardly sixteen, he became operator at Port Huron at six dollars and a quarter a week. Here he worked almost night and day, perfecting himself in his delightful employment. He took hold of each detail with a will, and labored so patiently and constantly, that his devoted and encouraged mother might well dare to say that the world would hear from her boy sometime. All in six months, he worked in Canada, in Adrian, in Fort Wayne, in Indianapolis; at the latter place, though not yet seventeen, he invented his first telegraph instrument, and automatic repeater, which always has been considered an important achievement for one so young. We next find him at Cincinnati, and at Memphis, caring little for dress, liked by his associates, but dubbed "luny," because absorbed in experiments which were considered impracticable. His services were finally dispensed with, as they had been several times before, on account of his having "such a thinking mind!"

Without money, and scantily clad, he took his way to Louisville, walking much of the journey, probably with no very cheerful thoughts about the encouragement given to inventors. Here he remained two or three years, till an unfortunate accident ended his connection with the firm. Under the new telegraph rooms was an elegant bank. One night, in his experimenting, he tipped over a

whole carboy of sulphuric acid, which ran through the floor, spoiling the ceiling, the brussels carpet, and the handsome furniture. At once another man was engaged, one who would try no experiments!

Wending his way again to Cincinnati, he soon lost the place he there obtained, because he spent too much time in the Mechanics' Library, poring over books on electricity. At twenty-one, being really a skilful operator, he secured a position in Boston; but he presently abandoned it thinking he could make more money in inventions, and opened a little shop. He was always hoping for good things, but, for a long time, the good things did not come. He made a chemical vote-recording apparatus, but the Massachusetts Legislature did not adopt it. He developed various inventions and improvements, but for lack of money, they were not successful. Still he kept on thinking. Invited to speak before a company, he forgot the appointment, and when called for, was at the top of a house putting up a telegraph line. He went directly from his work, and was abashed to find himself in the presence of a room full of elegant ladies, but he was familiar with his subject, and spoke impressively. This shifting life, the constant struggle to make of use the thoughts within him, was wearing. He was restless, too. He resolved to try New York. Here for three weeks, he walked the streets looking for work, penniless and despondent. Nobody wanted an experimenting operator! Many would have given up in despair, but only those win who persevere. By chance, he stepped into the office of the Gold Reporting Telegraph Company. Their instrument was out of order. His offer to repair it was received with incredulity, but he was permitted to try. He succeeded, and was at once given an excellent position. Shakespeare says: "There is a tide in the affairs of men, which, taken at the flood, leads on to fortune;" and this tide had come to our inventor at twenty-three. Henceforward there were to be no discharges for "luny" experiments. Henceforward the world was to sing his praises, and fortune was to pour into his lap a half million dollars in the next ten years; the results of his "thinkings."

The Western Union Telegraph and the Gold and Stock Companies paid him a handsome salary, with the provision that they might have the first opportunity to buy any of his inventions. A large electrical manufacturing establishment was opened with this in view at Newark, N. J. With his force of three hundred men, he soon had forty-five inventions and improvements in hand, and was described by the United States Patent Commissioner as "the young man who kept the pathway to the Patent Office hot with his footsteps."

For some time, it had been a dream of his to perfect the duplex system of telegraphing. He be-

lieved that two messages could be sent at the same time over the same wire—a plan which the world had heartily laughed at. But now, to the astonishment of everybody, he invented the quadruplex system by which *four* messages go at *once* over the same wire! The world ceased to laugh, and woke up to the fact that the very troublesome young experimenter was, as Professor Barker said, “not only the greatest inventor of the age, but a discoverer as well;” in fact, that the Grand Trunk train-boy was a genius!

When he was twenty-six, a new force came into his life, a love for an intelligent, sweet-tempered girl, Mary Stillwell of Newark. There was no



THOMAS A. EDISON.

time for a wedding journey, only an hour or two for a quiet ceremony, and then the thinker went back to his shop to work far into the night. A friend returning from the Western Union Telegraph office in New York, seeing a light in the laboratory, climbed the stairs. “Hello!” said he. “What are you doing here this late? aren’t you going home?”

“What time is it?” asked Edison, half bewildered by the interruption.

“Midnight, easy enough. Come along.”

“I *must* go home then. I was married to-day,” was the reply of the man as absent-minded as Sir Isaac Newton, who is said to have stirred the ashes in

his pipe with the finger of his lady-love, who refused him in consequence.

Three years later he removed to Menlo Park, a barren place, twenty-four miles from New York, where he hoped to work in quiet, which however was not permitted him; and he remarked jocularly to a friend: “I am considering the idea of fixing a wire connecting with a battery that knocks over everybody that touches the gate.” And yet, with a pleasant smile, he gave kindly explanations to any one really desirous to understand his work. Sometimes his listeners were intelligent; sometimes stupid. Once after he had explained the telephone most carefully, the visitor said, “Yes, I comprehend perfectly; simple enough. I understand it all, except how the sound gets out again!”

“You can imagine how I felt,” says Mr. Edison. “I gave him up.”

At Menlo Park he built a laboratory twenty-eight feet by one hundred, and filled it with batteries, magnets, etc., the machinery run by an eighty horse power engine—the Port Huron basement on a larger and grander scale.

Here all the world came to see the wonderful phonograph, the “talking machine,” into which a person can sing or speak, and by turning a handle, the same tune or words be reproduced; a blunt steel pen or stylus is made to press against a sheet of tin foil by the vibrations of a plate set in motion by the voice; when the pen is replaced at the end of the groove which it has traversed, the sound is given out again. Of this instrument, Edison says: “I have invented a great many machines, but this is *my baby*, and I expect it to grow up and support me in my old age.”

Here too was the carbon telephone, used in various parts of the United States; the tasimeter, which measures the heat even of the far-away stars; the aerophone, by which the sound of the voice is magnified two hundred and fifty times; the electric pen for multiplying copies of letters and drawings, over sixty thousand now in use in this country; the automatic telegraph, which permits the transmission over a single wire of several thousand words per minute; the incandescent electric light—all these inventions and many others were at the great wonder house at Menlo Park.

The public interest centres now in the electric light, called Mr. Edison’s “crowning discovery.” The first method of illumination by electricity was by the voltaic arc, discovered by Sir Humphrey Davy; the electric current passing between two carbon points. In 1862 Faraday introduced the electric light into a British lighthouse. The second method was an arch, inside of a glass globe, brought to white heat by the friction of an electric current. Drexel, Morgan and Co., New York bankers, and some others, put one thousand dollars in Mr. Edison’s hands, that he might experiment in order to make the light of practical use. He is said to

have tried two thousand substances before deciding upon fibres of bamboo for the arch in the vacuum of his glass globe. As the United States has four hundred million dollars invested in gas, and England five hundred million, the wealth in this light of the future will be seen readily. In ten cotton factories in Fall River, Mass., forty-five hundred Edison lights are used, much to the joy of the workers, where gas-heated rooms formally injured sight and health. Over sixty thousand lamps are now in use, burning six hundred hours before the bamboo is replaced by a new one.

Perhaps most interesting of all is Mr. Edison himself, who has been called the Wizard of Menlo Park. Five feet ten inches high, with boyish but earnest face, light gray eyes, his dark hair slightly gray falling over his forehead, his hat tipped to the back of his head, as he goes ardently to his work, which has averaged eighteen hours a day for ten years, he is indeed a pleasant man to see. You perceive he is not the man to be daunted by obstacles. When one of his inventions failed — a printing machine — he took five men into the loft of his factory, declaring he would never come down till it worked satisfactorily. For two days, and nights and twelve hours — sixty hours in all, he worked continuously without sleep, until he had conquered the difficulty; and then he slept for thirty hours. He often works all night, thinking best, he says, when the rest of the world sleeps.

He is the very embodiment of concentration and perseverance. When developing his automatic telegraph, says his friend:

Edison sat with a pile of chemistries and chemical books that were five feet high when they stood on the floor, and laid one upon the other. He had ordered them from New York and London and Paris. He studied them night and day. He ate at the desk and slept in the chair. In six weeks he had gone through the books, written a volume of abstracts, made two thousand experiments on the formulas, and had produced a solution — the only one in the world — that would do the very thing he wanted done — record over two hundred words a minute on a wire two hundred and fifty

miles long. He has since succeeded in recording thirty-one hundred words a minute.

Yet with all this devotion to work, he greatly enjoys fun. He said one day to his old friend of whom he learned telegraphing, Mr. Mackensie, "Look here — I am able to send a message from New York to Boston without any wire at all."

"That is impossible."

"Oh! no. It's a new invention."

"Well, how is it done?" asked Mr. Mackensie.

"By sealing it up and sending by mail," was the comical answer.

He cares nothing for display, and when tendered a public dinner, declined, saying, that, "one hundred thousand dollars would not tempt him to sit through two hours of personal glorification." In his home, he finds his recreation, with his wife and children, to whom he is devotedly attached; one child, Mary Estelle, is nicknamed "Dot," and another, Thomas Alva Edison, jr., "Dash."

But this modest man has received honors from all the world. At the great Electrical Exposition at Paris in 1881, two salons were devoted to his inventions; these halls were lighted, as well as several others, by his beautiful lamps. The Royal Society of London has exhibited his works with pride. Union College has made him Doctor of Philosophy. From scientists he receives over one hundred and fifty letters daily, in French, German, Italian, Spanish, Russian and Turkish.

Already he has taken out several hundred patents and is as enthusiastic, as absorbed, in his work as ever. Only thirty-seven, his life seems but just ripening into its wonderful fruitage. Electric engines are much in his thought. He said recently, "Anything is possible with electricity. A new discovery may be made any day."

That Mr. Edison has genius nobody will deny; but probably he would have accomplished little without his broad reading, and well nigh unparalleled devotion to work.

WAYS TO DO THINGS.

BY THOMAS WILLIAMSON.

XXIV.

HOW TO MAKE AND PITCH A TENT.

FIRST, to familiarize yourself with your proposed task, make a sketch of your intended tent (*fig. A*), which should be six feet high and

cover a square on the ground six feet each way.

Such a tent will require, of yard-wide cotton, thirteen yards; two yards for the front, two for the back, and nine for the main cover. The cost, if made of unbleached cotton, will be about \$1.30.

The permanent poles (those to be used near home, or wherever transportation can be had)

should be of sawn stuff. The two uprights should be six feet nine inches high, sharpened at the foot,

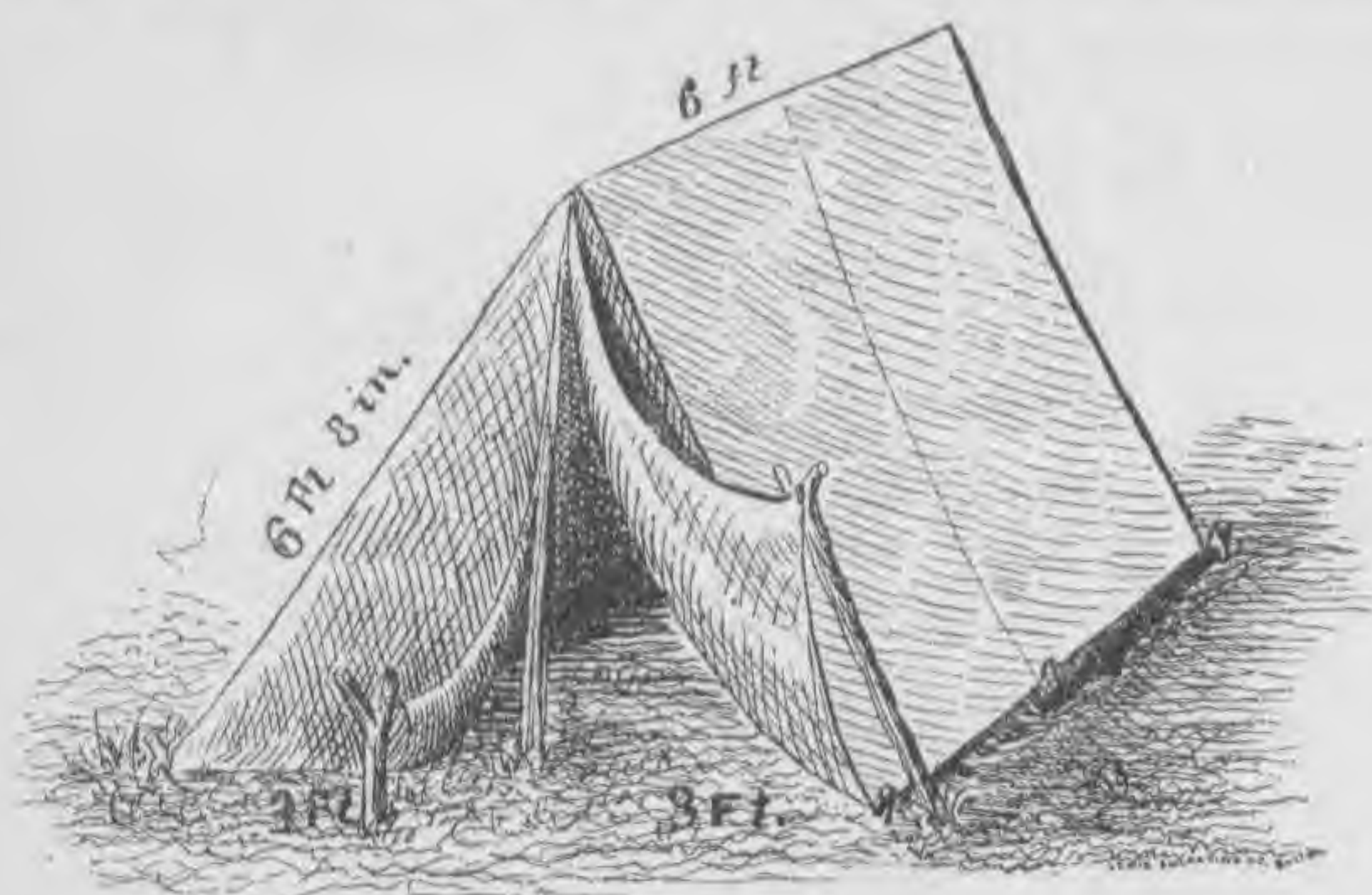


FIG A

and cut off square at the top with holes bored in them large enough to hold the good-sized nails which will also pass through holes in the ridgepole as shown in *fig. B*.

When your camping-ground is far from home, and you have no transportation, poles can be cut in the woods, roughly trimmed, leaving short pieces of the branches for hanging things on, fewer being left on the pole in the doorway than on the one at the back (*fig. C*).

Tent-pegs ought to be cut in the woods (*fig. D*), the main stem sharpened and the branch cut short,

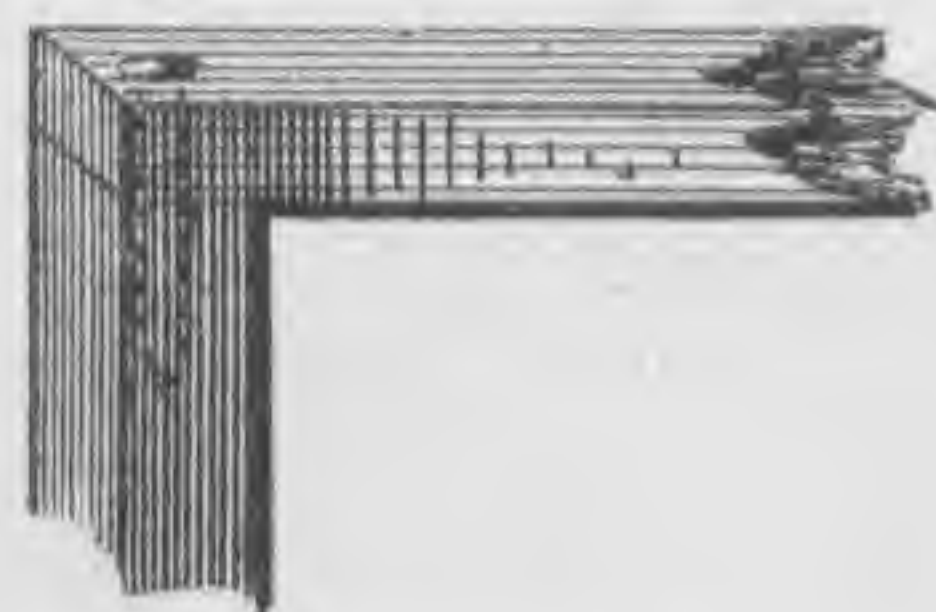


FIG B

yet left long enough to hold the loop of the tent-cord. The top should be square, to be hammered easily.

Take two yards of cotton and cut the piece diagonally, as in *fig. E*. Now "wide-awake" boys know that this diagonal, being the hypotenuse (or slant line) of a right-angled triangle with a base one yard and an altitude two yards, is equal to 2.23 yards, nearly two and one fourth yards long. These two pieces will make the *door* of your tent.

In like manner two yards more, similarly cut, will make the back of the tent. Cut

the remaining nine yards into two pieces and sew them together so as to make them one piece two yards wide and four and one half yards long.

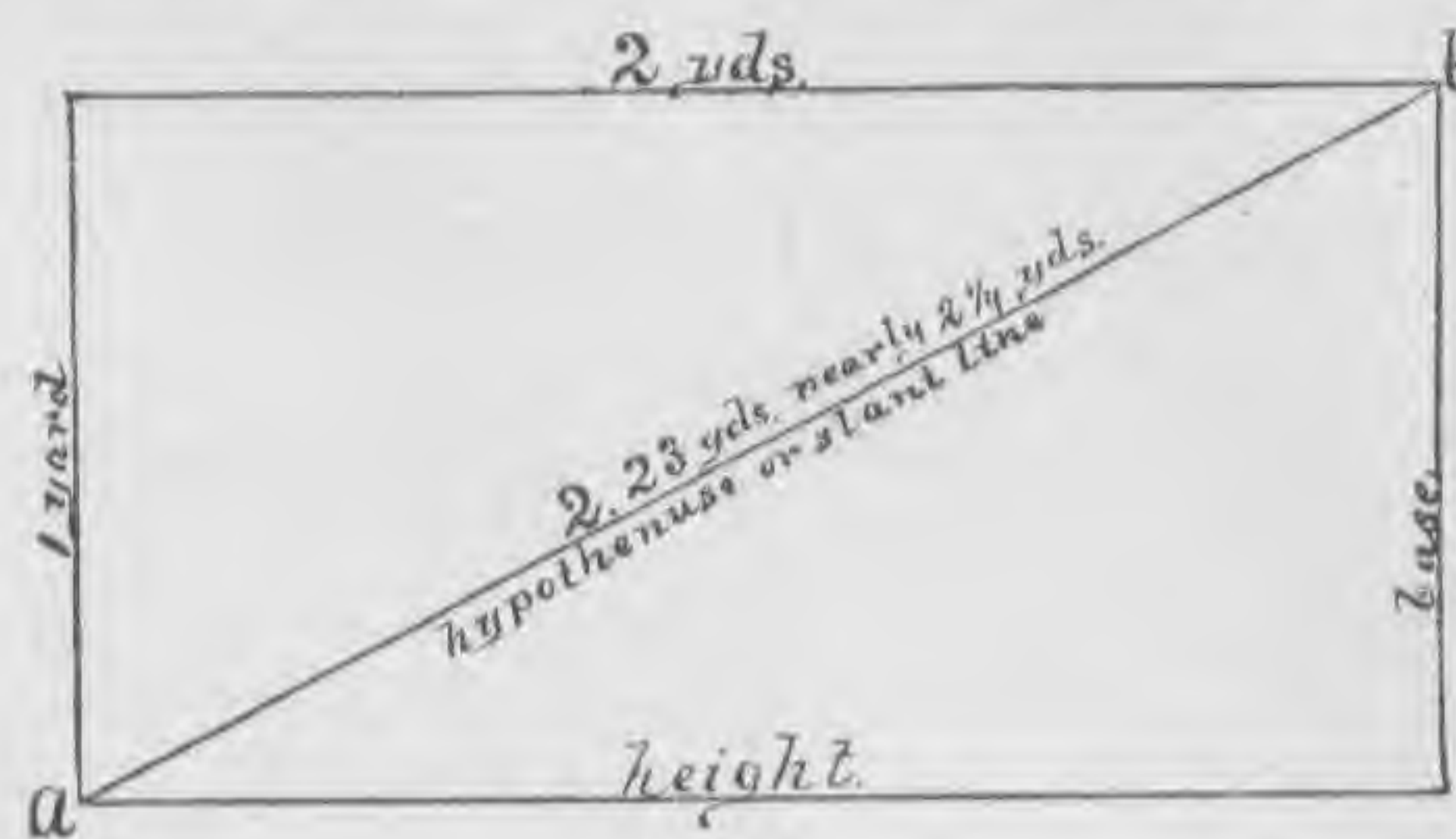


FIG E

Mark the centre of each side of this piece *c c*, as in *fig. F*.

Sew the pieces for the back and front to the large piece, the longest sides of the triangle fitting the lines marked *c d*, as in *fig. G*.

The line from *c* to *a* is to be sewed up for the back, and a similar line left open for the door.

Lay the ridgepole

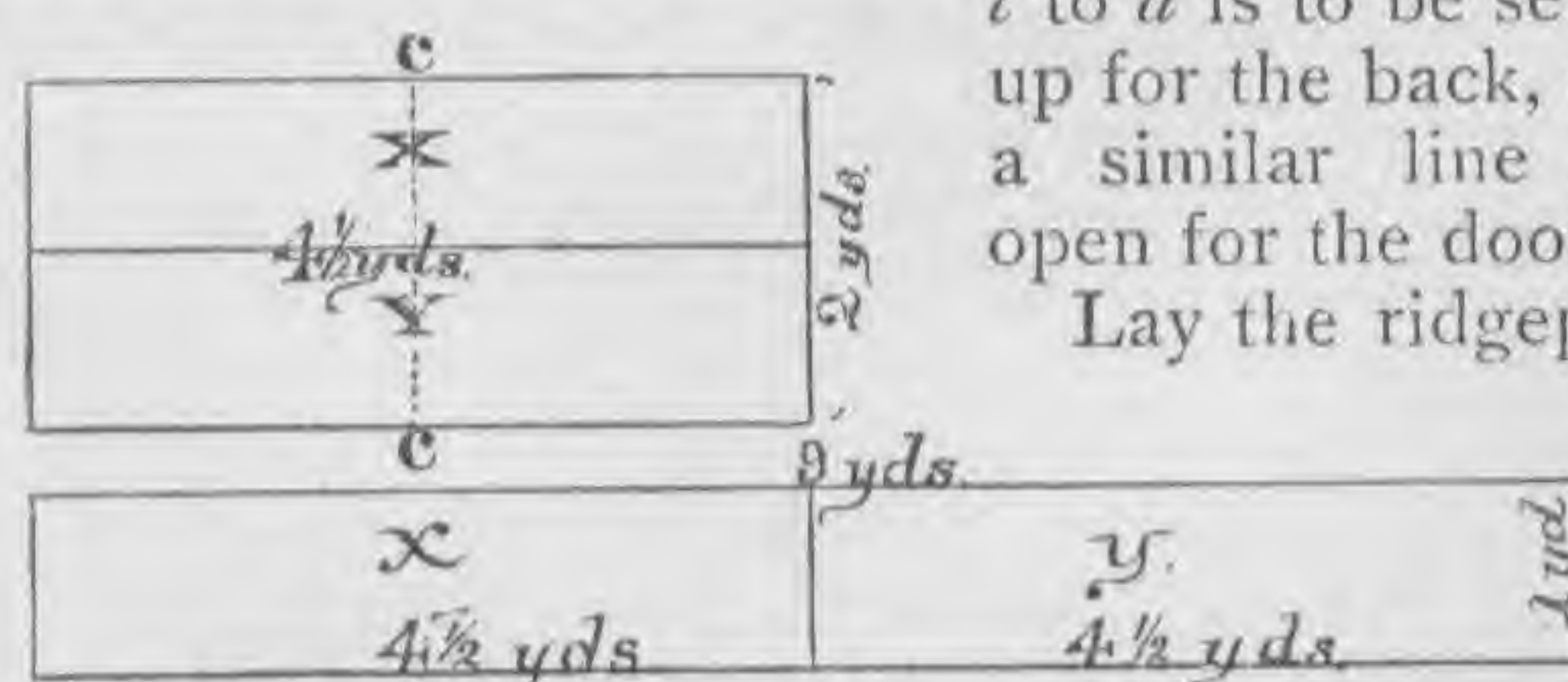


FIG F

on the ground. Drive a stout pin like this (*fig. H*) in the ground at each end of the pole opposite the nail-holes. Loosen these pegs by slight blows of a hammer and pull them up.

Set your uprights firmly in these holes. Put your ridgepole across from top to top; fasten with nails passed through the holes in ridgepole and uprights. Throw the tent-cover over the poles and fasten the four corners down firmly by pegs driven

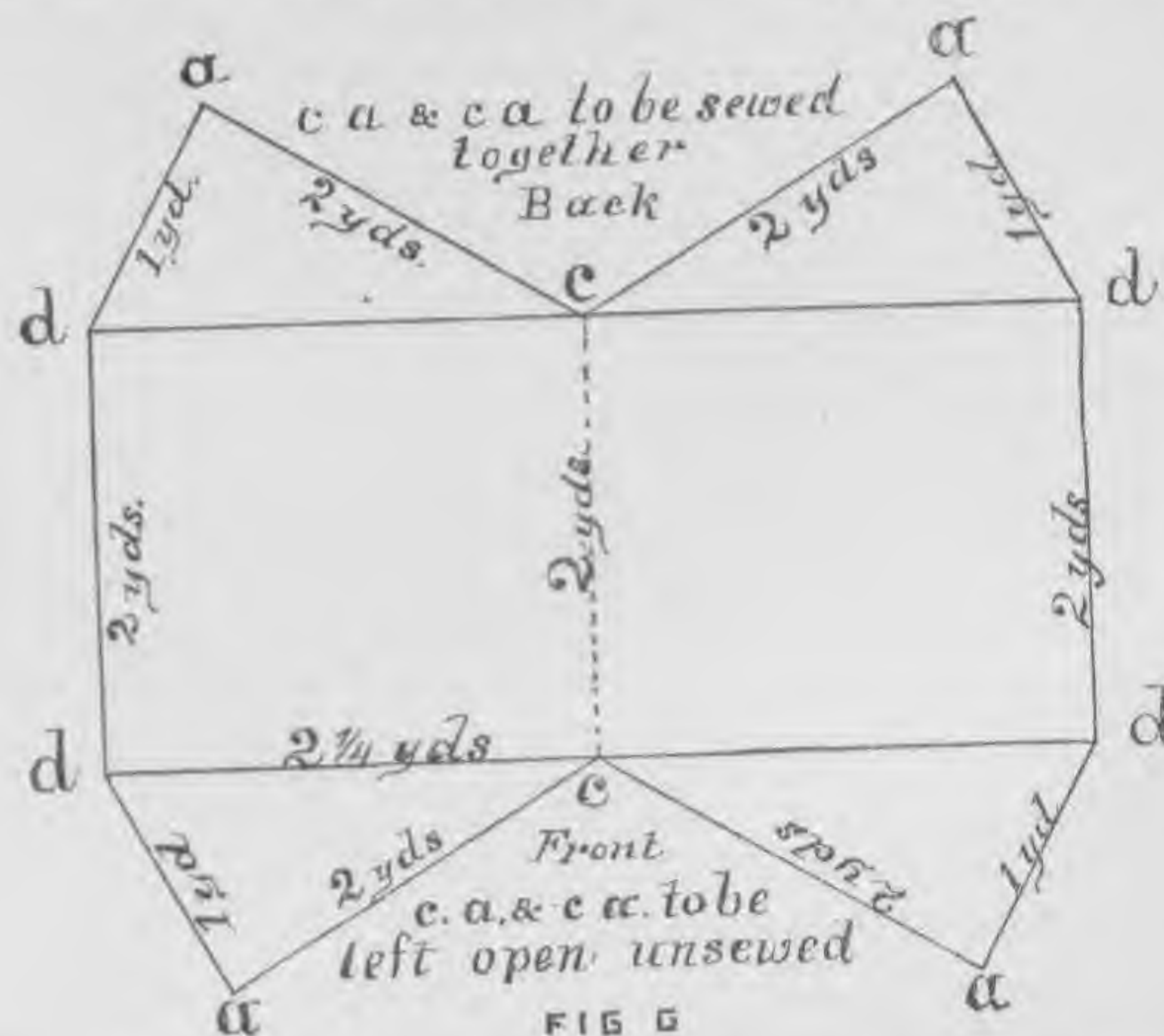


FIG G

into the ground about three feet from the feet of the uprights; one boy should hold one peg in the



FIG C



FIG D

loop, another boy opposite to him stretching the tent tightly in driving.

Drive four more pegs; one in the middle of each side of the square space — the one at the door is only used in bad weather or at night. At other times the door-flaps are thrown back. If you have a fly (an extra tent-cloth over the ridge-pole), you will need



FIG. H.

to buy nine yards more, also to provide longer cords to reach the ground. A stout cord should be sewed as a welt all around the bottom of your tent.

The loops for the *eight* pegs will be *nine* in number; two of them at the door being fastened to one peg.



FIG. I.

When your tent is up for actual use, a ditch should be dug close to the tent to carry the rain-water off in order to keep the interior sleeping ground dry. It is also best to pitch your tent with the back up hill on a slight incline; the ditches in that case need be but three — at the back, and on the two sides; these should extend, however,

considerable distance beyond the front of the tent.

In camping out each person ought to have an oilcloth and a blanket, as it is frequently necessary

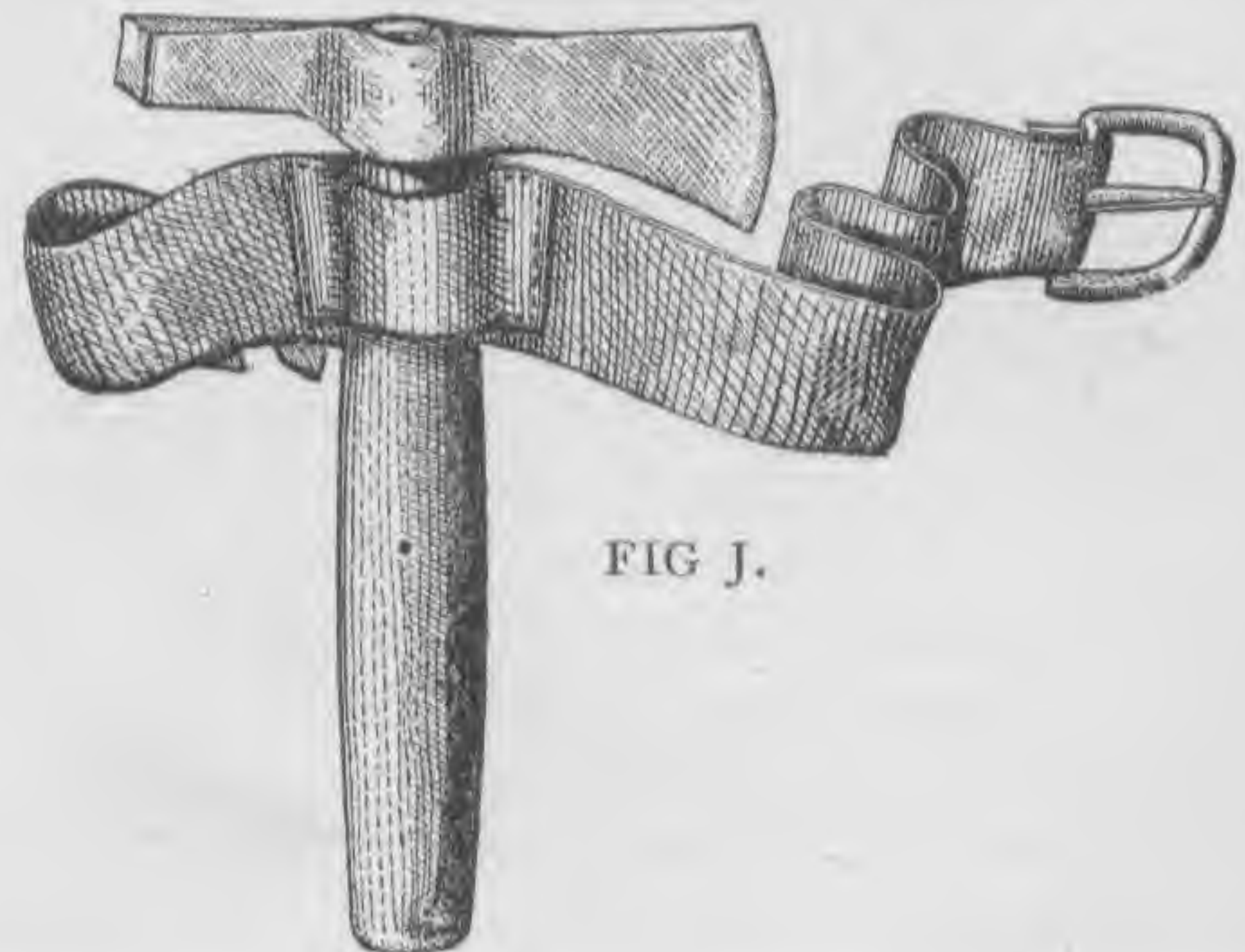


FIG. J.

to sleep on the ground. When not pressed for time, elegant bedsteads may be made of saplings stretched upon a framework resting on four upright forked stakes driven into the ground. These *spring-beds* must be put on the right and left sides as you enter your tent, leaving an aisle in the middle.

Each boy in the party ought to have a light hatchet, carried in a "frog" on a stout leather belt, with the edge to the front and covered with a leather casing, unless the wearer be a very careful fellow. *Fig. J* shows a shape I have always found very convenient.

ANNA MARIA'S HOUSEKEEPING.

BY THE NEXT NEIGHBOR.

XXII.

A DRESS REHEARSAL.

OF course the spring sewing must be done before you can go away for the season. Never stop to wish for somebody else's purse as long as you have a few dollars in your own, and wits to make them go as far as possible. Suppose we look over the boys' clothes and get them off your mind before we settle to your dresses. Things have an air of being at the end of the season, but they must last a few weeks till milder weather.

The worst of boys' clothes is that being mostly woollen they absorb dust and odors to that degree, aunt Jane declares she can smell a boy across the room by his fusty jacket. Every closet ought to

have a window; but as every closet does not, all the boys' suits should have a thorough airing, once a week. On a sunny day, at aunt Jane's, you will see the back porch strung with lines of trousers and jackets turned inside out, and swinging in the wind from breakfast time till four in the afternoon. First they are whipped and shaken till the dust is out, grease and mud stains taken out with a stiff manilla scrubbing-brush, hot water and soap, any part of the lining that is soiled is scrubbed in the same way, rinsed in many waters—sometimes aunt Jane says it takes a dip in very weak copperas water to cleanse and sweeten them to suit her—sun and wind all day doing the rest. Then the closets have the floors washed often, and the doors left wide open every day, while the rooms are airing, and by this care that immaculate woman keeps her boys' ward-

robe as neat and sweet as any girl's. One rule is that no boots and shoes are kept in closets with clothing, for leather and woollen suits together get up a smell of their own that is, to say the least, extraordinary. For one thing the boys never wear their boots or thick shoes upstairs, or in a carpeted room. As soon as they come home the boots are taken off in the little dressing-room off the entry, put on the back porch to be cleaned if they need it, and then all go in the boot closet down-stairs, while the boys wear slippers or low shoes about the house. It was some trouble to make them understand they were not to come stalking into the sitting-room in rubber boots or walking shoes, but the noise, dust and wear of carpets saved by it would make any woman's heart glad. The boys pretend their mother copies Turkish manners and would like to have them leave their shoes outside, like the 'Turks at the door of a mosque, but they find stout shoes last longer for being kept to their own particular uses, and carpets certainly wear better when not ground by half-inch soles.

How baggy at knees, and wrinkled at elbows the suits are, when schoolboys have nearly gone through them. To prevent this, every Saturday night, after they have been brushed, dampen the knees of the trousers and press them with a heavy iron, or leave them all night under a smooth board and heavy weight, the way soldiers keep their uniforms smooth. When a jacket is worn rough, lay it on a table, scrub with a stiff brush, hot water and soap, using as little water as possible, rub with a dry crash towel, put a thin cloth over, and press the garment well. A shabby coat often comes out as good as new from this treatment. Coats must not be hung by the loop on the collar for any length of time, but be put away on the wire shoulder forms which cost ten cents apiece. Trousers and vests should be laid away in press, to keep them in shape.

Always in the spring, after beating, cleaning and a grand airing, take the woollen clothes in while the sun is on them, and put away, with as little folding as possible in large chests, lined with thick paper, and plenty of gum camphor in rather large pieces among the layers. I hope to see the large wooden chests for storage form part of our outfits as they were of our grandmothers'. Boxes are much better to keep clothes in than leather trunks are, and a set made of cedar, or lined with veneers of that wood, built very large to receive clothes without much folding would be better than cedar closets, especially if there is a dry attic to store them. One chest for blankets, one for men's clothing, and one for women's, should be part of the family plenishing, and descend as heirlooms after the sensible custom of our ancestors. Furs keep best in the new barrels made from paper pulp, which can be sealed up to wholly exclude moths. If you must store them without any such convenience, beat them thoroughly on the inside, brush the fur

well, put into a clean large paper bag which you get from the grocers, with lumps of camphor in the pockets and folds, and paste the top of the bag closely. Keep each article, so sealed in a separate bag, in a box or trunk, lined with camphorated or tarred paper, and paste strips over the keyhole and closure of the trunk. This work should always be done as soon as you are through wearing furs and woollens. Moths seldom attack things in constant use, but seize their chance if articles are left in closet or trunk for a fortnight unguarded. Don't leave your winter dresses and the boys' clothes hanging in unused closets or the attic, half the summer. Beside moths, the ants, wasps and flies will gnaw holes in them, dust gathers, and light fades them. The waste of clothes comes nearly as much from neglect as from use.

I know, of course, that girls like to run through dresses and have new ones, but to dress well on the limited means, old things must be kept in succession, and tenderly cared for. I have just been helping a young lady look over her wardrobe, who has been in straitened circumstances since the war. It is a sad instance of the way people can come down from a brownstone house in the fashionable part of New York, a house where the window curtains were three hundred dollars a pair, the conservatory and aviary cost enough for you or me to live on, and my young lady's school dresses were forty and fifty dollars apiece — enough to buy a dress for a court ball, as ladies who have lived much abroad will tell you. First came embarrassment, then a crash in business, the fine house and furniture were sold at auction, the parents died in the struggle with narrow means, and my brave young lady took a place as governess. But as if harm could not leave her without its utmost spite, the little bank stock she had left was lost, and on the heels of this ill fortune, in a crush at a city shop one day, her handsome cloak, a relic of old times, was cut in three or four places, and her dress pocket picked of the last money she had in the world. This befell just as failure of their income obliged the family she had been with for years, to dispense with governess and servants. Don't say these things never happen outside of stories. They never happen in stories half so sadly as they do in real life as you will know when you read more in that deep volume. This happened in the winter of 1884. But this young lady, taught as well-bred girls are to take care of things, has been able to dress well for ten years without spending twenty-five dollars a year on her clothes, by making clever use of her own and her mother's old wardrobe. Such a marvel of thrift I never saw, and I wish women could take lessons of this sorely tried girl, how to make the most of what they have. White stockings are out of use, you know, but Emma, having a stock of fine balbriggans, colors them pale blue and pink to cor-

respond with summer dresses, dipping some in dye made of deep bluing water, set with alum, and others in pink dye extracted by boiling scraps of crimson cotton flannel. Fast as the well-darned feet wear out, new ones are deftly made from the stronger parts of old pairs, and these are not bungled, but so carefully joined that it is rather a pleasure to one fond of nice needlework to see them. Her white silk lace turns yellow with wear, past restoring — she does not throw it away, but treats it to a dip in the same bath with her stockings, and has ruffles of pretty pink and blue blonde to trim cravats and fichus. She buys a silk kerchief in tasteful color for twenty-five cents, and embroiders a large initial in the corner for a stylish bit of neckwear, but she doesn't go to the expense of having it stamped, or buying embroidery silk at five cents a needleful. She dampens the corner of the kerchief, and irons it over the embossed initial on another handkerchief laid on flannel, and the letter is transferred in relief, to be penciled over with ease. Odds and ends of silk are raveled, scalded to set the color, or dipped to get the shade wanted, an skill does the rest. You never see neater embroidery than Emma does with such materials. I am given to contrivance myself, but my poor thrift was left far behind by hers. Fancy ripping out the chain stitch embroidery on a linen suit, and keeping the thread to darn merino hosiery. Her black velvet jacket first was worn as a broad rose-colored sash at one of Mrs. Lincoln's receptions, when Emma was in the nursery! It has been successively part of a dress flounce, and a table scarf, but being originally very good velvet, it bids fair to outlast several dyeings and piecings yet. The best of it is that Emma is such a perfect mistress in the art of making over that her work has not the poverty-stricken air of most pieced and furbished things. This is an art worth learning and learning well.

Like a nice girl you always wear a thin under kerchief or high corset cover to take the soil from the skin, instead of disgracing the neck of your dress linings. And you find it not too much trouble to wear arm shields in the sleeves, for these contrivances not only insure neatness but keep a dress from the most destructive wear. There is an acid in perspiration which makes the fibre of fabrics decay, as surely as the black dye in cloth. But instead of buying shields, you will find it better to make them of thin cambric, brushed with sweet oil and paraffine wax, and dried over a hot stove. Waxed paper makes good shields, that stand more wear than any one would suppose, and being very thin take less room in dresses. Then you are careful to shake and brush a dress well before hanging it away after wearing it. It improves all dresses to turn them inside out and hang them out-of-doors for several hours after wearing. They keep a freshness that is pleasant,

and this freshness preserves a dress, for stale air, dust and secretions from the person all subtly injure colors and fabrics in time. Be careful what kind of brushes you take to different materials. Stiff brushes wear out things fast, and the best way is to take care that dresses get little mud or soil to need harsh treatment. After the grass is green, the best and easiest way to brush all dresses from lawn to cashmere and silk, is to take them to a piece of clean sward, and beat the skirt back and forth, letting it sweep the sod at each stroke. The grass acts as a firm, soft brush, that does not fray any fabric, and the work is done in much shorter time than by a clothes brush. Grenadines and fine pleated lawns are refreshed in this way better than any other. Silk and satin should have a whisk of long, soft hair. Velvet should always have the dust wiped off with a piece of black crape, before putting away. It will grow rusty much sooner if not kept free from dust. Velvet jackets, cloaks and dresses should not be folded in drawers, but hung by many loops in roomy wardrobes, where they cannot wrinkle or be crushed.

Now what to do about these dresses for the season. You have been thinking whether it is best to make things over, or buy a few new ones and spare the time and trouble of re-making. That depends. If you were a very busy person with more profitable employment for your time, it would be better to buy one or two new gowns, and let the old ones go. But you see, you have more time and skill than money, and you should spend of what you have most. A little money put into nice trimmings and fancy things with an old gown gives a better effect than a plain new dress. Then fashion helps us out with pretty contrivances. Your blue plaid gingham needn't be thrown aside because the waist won't meet in front. Cut off buttons and buttonhole edges, and fill the space with a puffed and shirred shirt or guimpe as it is called (pronounced gamp). Get a dressmaker to come one day, to fit and baste all these things, and then another day to finish off when you have done the sewing. The buff dress that was ruined with acid as you think, is not past help, for you can set in new pieces with the sewing machine, mind, not by hand, and cover the places with broad trimming of the new heavy linen torchon, that is durable as Irish crochet. Do all piecing with the machine, which makes a more even join than the nicest hand sewing, use fine thread and press the seams open. I believe anything can be done with dresses, since hearing of Mrs. Governor William Smith's claret silk that was spoiled by lemonade, but had thirty pieces set in the body and flounces so cleverly that no one seeing it is the wiser. Mrs. Governor William Smith's devices, or those of her clever little dressmaker for her, were staple reminiscences of my girlhood when Aunt Paulina Tres-

cott, came to do our family sewing. Wasn't an India shawl caught in the carriage door and torn zigzag in a heartrending way, and didn't Miss Trascott take a week darning it with the fringes so beautifully that Mrs. Governor Smith always pointed out the spots to particular friends with affectionate pride? I wonder if that shawl is in existence yet? It ought to be.

Nothing is the matter with your flannel suit save the Hercules braid is rusty. You can rip it off and have it dyed, or you can take a shorter way, by going over it with a toothbrush and liquid shoe-blackening. Let me tell you "Brown's" or anybody else's polish has a great many uses besides being good for shoes. Your black straw turban looks dusty and faded. Brush it well and give it two coats of polish, letting it dry between, and you wouldn't know but it had come from the milliner's. That little soft black felt hat would be useful in riding, if it were not gray with wear; sponge it with the polish. It won't look glossy, but the black will be revived. The boys' hats which turn greenish, and the hat bindings are improved by such a dressing, and your old rubber cloak and sandals can be made shining and new with a coat of it. I never knew of its injuring any fabric. There is vitriol in shoe-polish true, but so there is in many black dyes for woollen goods. When you mend black kid gloves, always go over the seams outside with a little blacking, and they will look neater.

Never give up black lace, or indeed lace of any kind till it is in fragments. When merely crumpled, wind it tightly and smoothly on anything hard and round, a broomstick, the long handle of a tin dipper or a bottle, and leave it fifteen minutes in hot steam over a kettle of boiling water, which will smooth it and revive the color. When aged and gray, it is time to re-dye it, and all your faded white silk laces with it. Yak lace can be dyed a dozen times and look as well as ever. White thread and cotton laces can be dipped in weak coffee, or tinged with bluing, or a dash of pink dye as you like, or you can paint dots of bright color on the figures with pigments mixed in clear varnish with Chinese white.

You want a wrap for riding. Take the faded Paisley shawl, that has been out of use ten years, and have it dipped in chloride of lime to discharge all the color, only a moment or two or your shawl will dissolve into rags, then rinse in five waters and have it colored pretty light blue, pink, or coffee brown. Not that you are to undertake this yourself, unless you have an Aunt Jane skilled in dyes to help you. All black and dark woollens or silks can be re-dyed black, light wools may take fancy shades, or little deeper than the original color, and many trimmings bear dyeing well. Dyeing and embroidery are the two resources of a slender wardrobe—for what can't be dyed, my dear, may be improved by quilting, braiding or powdering with brilliant dots or sprigs of needlework.

DAYS AND NIGHTS IN THE TROPICS.

BY FELIX L. OSWALD.

CHAPTER XI.

THE HACIENDA DEL MONTE.

Children of the Virgin-wood,
Who has rocked your airy cradle,
Who provides your daily food?

IN the hilly border-country between Peru and Northwestern Brazil there are hunting grounds where an American schoolboy would have more fun in a single day, than he could get out of twenty admission tickets to the best zoölogical garden. The country is a little too mountainous for the largest kind of Brazilian game, the tapirs and ant-eaters, but the woods are fairly alive with monkeys of all sizes and species. Some of the smaller varieties are as numerous as squirrels in a Kentucky

beech forest, and it seems strange how they can all make a living; especially in the rainy season when ripe fruit gets scarce, and considering their foolish habit of wasting about ten times as much as they use.

About six miles west of the Yuvari River we reached a plantation where we intended to make our headquarters for a couple of days, and when we passed the orchard the guide called our attention to a place where the ground was thickly covered with torn-off banana leaves and half-ripe oranges—all the work of the mischievous little backwoodsmen. "Five years ago this plantation was worth twice as much," said he, "but since Don Gaspar died, the monkeys have it all their own way."

"Is it so hard to get rid of them?" I asked.

"Yes, rather," said he, "but besides, the present owner is an old widow who treats those long-tailed rascals like her own children, and her Indian

tenants are too poor to buy firearms and cannot help themselves in any other way. Hi, Captain! is Donna Rita at home?" he called out when we met a fat old Creole at the end of the garden lane. "That's the Mayoral (the overseer) of the plantation," whispered our guide.

"Hallo, comrade! back at last?" said the old fellow, who seemed to know him. "Come in, Caballeros, we have expected you for several days; the old lady will be glad to see you."

"How are all your monkeys?" inquired the guide.

"Oh, thank you," laughed the Mayoral, "as lively as rats, I am sorry to say; look out! they will soon be after you."

Our arrival had, indeed, already attracted the attention of Donna Rita's pets. Hairy faces peeped out of the foliage of the forest trees, and one long-tailed native clambered down from his perch and eyed us with evident surprise till he caught sight of our dog, and fled with screams that were at once answered by scores of his friends in the treetops, just as street boys are apt to join in a hue and cry without troubling themselves to ascertain the cause of the excitement. At the gate we met another monkey, a big, bald-headed and gray-bearded old rascal, who walked up to us as if he were going to welcome us in the name of his mistress, and looked so respectable that we were just going to ask the Mayoral to introduce us by name, when he suddenly snatched away Benny's hat, and sprang away towards the house where he jumped upon the roof of a wooden dog kennel.

"There! another hat gone!" laughed Benny. "Well, I can make shift with my neckerchief."

"No, no! here, take this stick," said the Mayoral, "go and knock his head off, if he doesn't drop that hat. Never mind the old lady; Heaven forbid that strangers cannot visit us without getting highway-robbed."

On the steps of the veranda a little Indian ragamuffin had a rough-and-tumble fight with a spider monkey, and at last managed to force his head into a sandhole, but at the bidding of the Mayoral he released his prisoner and ran up-stairs to summon the lady of the house. Before he returned we heard a caterwaul from the other end of the building, and soon after Benny came back empty-handed and almost crying, and told us that the monkey had not only refused to surrender his hat but had also appropriated his neckerchief and retreated into the interior of the building.

"Gone up to the dining-hall, I guess," said the Mayordomo. "Never mind, we'll catch him now, just wait a moment."

The Hacienda del Monte was one of those scattered frontier plantations where white travellers can always find entertainment and lodging, the same as in the backwoods Missions where the monks generally keep a few bedrooms for the accommoda-

tion of strangers. Before the Indian boy had delivered his message, the noise of the scrimmage seemed to have announced our arrival. Presently we heard another scream, as if the robber had come to grief, and when Donna Rita stepped out on the platform of the veranda, one of her attendants appeared with the purloined dry goods and restored them to the rightful owner.

"*Mil pardones*—a thousand pardons, gentlemen," said the old lady, "you had a bad reception, but if you have travelled and seen the world, I trust you will make allowances for the difficulties of my situation—twenty miles from the next church



FOUR-HANDED MARAUDERS.

and school, and scores of big and little savages to take care of. That monkey is the grandfather of our kitchen-pet, and it seems strange how he could forget himself so far. Well, make yourself at home," said she, "supper will soon be ready, and—Listen! what's that?" she interrupted herself.

We heard a clatter of falling dishes.

"Dios! that must be the *calvo*, the baldhead," said the old lady. "I gave orders to lock him up, but he must have given them the slip. Excuse me a moment."

"More trouble," sighed the Mayoral, when she was gone; "a whole house full of mischievous children could not be more expensive than those wretched monkeys."

"Wouldn't it be the cheapest way to get a few dollars' worth of ammunition and clean them out?" asked the captain.

"Kill them all, you mean? No, that wouldn't do either," said the Mayoral, "you need some household monkeys to keep off the outsiders. The woods are alive with wild baboons, and they would plunder us day and night if it was not for the jealousy of the tame ones. They guard our orchards."

"What! like watch-dogs keeping off burglars?"

"Yes; come here and I'll show you," said the Mayoral. We followed him to an outbuilding where he filled a haversack with corn and small pine-apples. At the upper end of the garden a picket-

fence divided the orchard from the wild hill-forest, and here the Mayoral scattered his provisions, without taking the trouble to call or whistle for his guests, but with an occasional look at the treetops. Before long one of the sharp-eyed bush-whackers caught sight of the proceedings, and leaping from his perch with a shrill scream, he came on at the top of his speed, and fell to as if he needed no help to dispose of the whole supper. But his first cry of glad surprise had already attracted the attention of his relatives, and presently a dozen or so came tearing up the roads from different directions and charged into the corn like pigs fighting around a swill-barrel. In the woods, too, a troop of hungry marauders gathered in the treetops, and chattered in an undertone as if they were holding a council of war.

(TO BE CONTINUED.)

WHAT TO DO ABOUT IT.

ARTINE. "Can you tell me whether it is possible to learn to play on the banjo or to sing, with no ear for music, or with very little ear?" Certainly you may learn both to play and sing if you choose to study. An ear for music is a natural aptness like the eye for color and form which makes it easy for a natural artist to paint. But no one says, "because I have no such gift for copying what I see without effort, I will neither learn drawing or writing" — which is really a very difficult kind of drawing. Instead, he studies line and shape by hairsbreadths, trying for days to imitate a single stroke, and counts the time well-spent for the skill it gives him. This is what you and all who as they say, have no ear for music must do to sing. You will have to listen to single sounds repeated till you can distinguish their difference from each other, their order and agreement, then you must imitate them. The first work is the hardest, and every step taken is greater than the next one. When one "without an ear for music" can tell two sounds apart, and make them, he has learned the most difficult of lessons in his art. But to learn you will need a faithful, patient teacher. If you ask whether it is worth the trouble to learn, I say yes unhesitatingly, for the pleasure music gives is the greatest support and cheer in life, and keeps one from low, trifling amusements. The ear and voice can be educated, developed in any one not naturally defective in organs of speech and hearing, and any one who has liking for music can learn to give pleasure in it to himself and others.

BEULAH R. "Could you please tell me if I would get a thousand buttons, could I get a prize?

I have not a thousand yet, but I am trying to get one." Sorry to disappoint the hopes of young readers, but neither a thousand buttons or a million postage stamps will ever gain prize or reward, and the story that anything of the sort has ever been offered is a nursery humbug, ranking with the tale of the man in the moon and the gold at the end of the rainbow, or salting a bird's tail to catch it. Will some one wiser than the wisest tell when the button and postage stamp delusion is likely to die out?

C. U. 1. "What was the news they carried from Ghent to Aix?" It has been said before in this department that the poem referred to was wholly an ideal subject, but you can well fit it to the time of the peace between Spain and the Netherlands after a generation of cruel war.

2. "Is iron colder than wood in the same temperature?" No; a thermometer will mark precisely the same degree in both substances. But the iron will feel colder than wood, because iron conducts the heat of the hand away more quickly than wood. It is your hand feels cold, not the metal.

3. "To what kingdom does water belong?" The ancients spoke of the animal, vegetable and mineral kingdoms, into which things terrestrial or earthly were divided, but water does not come into any such division.

CAROLYN, who inquires for the probable value of a million defaced postage stamps, is referred above. The only use ever made of them is for a better sort of paper pulp than usual, unless one fancies papering the walls of a gentleman's room with them, as is done in England.

THE WISE BLACKBIRD.



TALES OF THE PATHFINDERS.

BY ARTHUR GILMAN.

XI.

CITIZEN SOLDIERS TAKE A STRONG FORTRESS.

THREE men were in earnest conference in one of the fine old New England mansions, in the early spring of the year 1745. On the banks of the Piscataqua, just opposite Portsmouth, N. H., lies the town of Kittery in Maine. The region was at that time not known as Maine, but as the County of York, in Massachusetts, for it was not until 1820 that the State of Maine was created out of the vast territory to the northeast, that had long been under Massachusetts government. Let us look at these three men, and see if we can catch some of their conversation. First, I notice the Reverend George Whitefield, a young man of twenty-seven years, full of zeal and fire, who had just come to America for the third time, and was gaining adherents by his earnest preaching. The second was ten years older. He was the Reverend Nicholas Gilman, pastor of the church in the neighboring town of Durham, in New Hampshire, where he was known as a devoted friend of the new-comer from England, and his own earnest and enthusiastic labors were so exhausting his strength that one might have seen signs that they were preparing him for the last struggle which was to close his devoted life in a few years. These two were the educated men of the group, for Mr. Gilman had graduated at Harvard College, in the class of 1724, with the celebrated Mather Byles, and Whitefield had studied at Oxford.

The third was the wealthy proprietor of the mansion, a man of fine presence, and great wisdom, who had reached the age of forty-eight. His portrait lies before me, and as I turn to it, I see a pleasant countenance from which piercing eyes look out. A well curled wig crowns the head and the elegance of dress betokens the comfortable share of the good things of this world with which he was endowed.

It was the person who is now spoken of as Sir William Pepperell, though he was then known merely as a man of wealth, prominent in public affairs, who had for fourteen years held the elevated office of Chief Justice of the Colony. It would lead one to suppose either that persons qualified for this high office were few at the time, or that Pepperell was appointed through partiality, for we read that he only began to study law at the time he received his appointment.

There sit the three men: the rich man of the world, who was a good church member; the "revivalist" lately arrived from England; and the New Hampshire pastor, who had a good salary paid by an attached people, in money, pork, beef, candles, molasses, malt, sugar, cider, rum, pasturing and wood, not to mention other articles that doubtless made his position very comfortable in the good old times.

The conversation is earnest, and we can gather enough to learn that it relates to some important enterprise in which Mr. Pepperell is invited to engage. We can hear Whitefield say that the scheme does not appear to him very promising; that the eyes of all would be upon its leader, and that if he should fail, he would receive the reproaches of the widows and orphans of the slain; while, on the other hand, if he should succeed, he would be the object of envious jealousy. Two days, the first and second of March, a Friday and a Saturday, seem to have been occupied by the conferences of the three men, and then they separate, Mr. Gilman going over the river to his peaceful parish, Mr. Whitefield returning to the good old town of Portsmouth, and the proprietor of the great house retiring to his couch to determine the weighty question that had been laid before him by the Governor of Massachusetts. Before they separate, such men at that time would naturally engage in prayer, and we see them kneel while the ardent English preacher, who had swayed thou-

sands of hearers at a time by the witchery of his inspired eloquence, poured out his soul, and, as we cannot help thinking, tried to make an impression upon the man of war at his side. It was a remarkable prayer. We can only gather up a few scraps of it from a letter that was written the following day by Mr. Gilman, and addressed to Whitefield.

It was marked "Let this be a secret between us;" but it has not been destroyed, and after so many years it is open to all the world.*

In those tones that touched all hearers, Mr. Whitefield prayed for a blessing upon the expedition and its leader; thanked God that he had put it in his heart to take up the labor; congratulated society that so great a man had put away every spark of pride and self-righteousness to enter upon the work and was uninfluenced by secular motives. It was evident that Mr. Whitefield looked upon the expedition as a sort of crusade, as a movement that was to set forward the cause of religion, and he was not alone in the view, as we shall see. There was an old parson named Moody, who volunteered to go on the expedition, and a good deacon, John Gray of Biddeford, wrote to Pepperell —

O that I could be with you and dear Parson Moody in that church, to destroy the images there set up, and hear the true gospel of our Lord and Saviour there preached! My wife who is ill and confined to her bed, is yet so spirited in the affair on hearing of your taking the command, that she is very willing that all her sons should wait on you, though it is outwardly greatly to our damage. One of them is already enlisted, and I know not but there will be more. She sends her duty to you, and says so long as she has life she shall importunately pray for you.

Deacon Gray's letter gives a hint of the nature of the enterprise in which Mr. Pepperell was asked to engage, especially to those who remember what we discovered when studying about the Patriarch of Norridgewock, and reflect that a war had just broken out between France and England which renewed the struggle between the Protestants and Catholics on our continent. It was the War of the Austrian Succession on the other side of the sea, and King George's War in America. It was in the early spring of 1744 that the declaration of war had been made, and by means of fast sailing vessels the news had been received by the French in their strongest fortress, that at Louisburg on Cape Breton Island, some time before it had been known at Boston, or, indeed, at any other place occupied by the English. Taking advantage of this early information, the commander at Louisburg had sent out an expedition which had been successful in capturing an English garrison at a place called Canso. This did not prove an advantage in the end for the French, for it alarmed the English in

New England very much, and led them to take steps which proved the most efficient retaliation. At the same time it afforded them just the information that they needed to enable them to make a successful attack upon Louisburg. The men who were taken at Canso were confined for a time at Louisburg, and then released and sent to Boston. There they gave an account of the fortifications and the men who guarded them. When a general has an enemy before him it is of the greatest importance for him to know how many men he will have to contend with, and what the nature of his fortification is. This was what the released prisoners from Canso were able to tell.

If you will look on the map, you will see that it must have been very important for the French to have a strong fortress at Louisburg, which was on a protected harbor on the outer shore of Nova Scotia. It served as a protection to the mouth of the St. Lawrence and it was a place from which expeditions might very easily be sent out against the New England coast.

There was at the time a graduate of Harvard College living at Damariscotta, who was interested in the safety of New England vessels sailing towards Newfoundland, for he was engaged in the fishing business which is still carried on in that part of the ocean. William Vaughan was a daring and enterprising man, as would be expected of one who made his living in so hazardous an occupation. No danger could daunt him, and he was so sanguine that he looked for success in any enterprise that he engaged in. Taking advantage of his opportunities, he gleaned as much information as he could about the situation of the French at Louisburg, and then laid before the Governor of Massachusetts, William Shirley, a plan for its capture.

If we could be admitted in the imagination to an interview between these two Williams we should find them, I think, looking over descriptions of the French works at Louisburg with intense interest, each vying with the other in the enthusiasm that he showed as the project for the capture was developed. They found that the town was situated on a tongue of land which jutted out to a branch of the sea that was so shallow and full of reefs that no ships of war could approach it. For thirty years the French had been engaged in building fortifications around the town, which was about two and a half miles in circumference. At this time, every point that an enemy could possibly approach was surrounded by a stone wall from thirty to thirty-six feet high, and a ditch eighty feet wide was outside of that, so that it seemed to the French that there could be no danger from attacks. Still, they had taken other precautions, and there was a battery on one of the islands in the harbor, as well as another directly opposite its entrance. In spite of the obstacles, the two men agreed that they would

* See "The Gilman Family, traced in the line of Hon. John Gilman, of Exeter, N. H." Albany, 1869. Pages 61-64.

try to capture the stronghold. The Governor wrote to England that he needed ships and seamen because he feared that the French would attack Nova Scotia, assigning this reason because he was afraid to tell the ministry the plan that he and Mr. Vaughan had made against Louisburg lest he should be told not to think of it.

Early in January, 1745, Governor Shirley asked the legislature of Massachusetts to take an oath of secrecy respecting a proposition that he wished to lay before them. I imagine that the members were somewhat surprised at the request, but they thought, perhaps, that the Governor was about to communicate something important, and so they did as he asked. They listened to his suggestions, and put the matter into the hands of a committee to report upon. One member, at least, was interested in the grand plan, and one morning some one overheard him in his private prayer asking God to give his blessing to it. Then the secret was out, and every one was astonished at the boldness, not to say rashness, of the scheme. The committee reported against the Governor and it was believed that nothing more was to be heard of the plan. Those who thought so were much mistaken. They did not know the persistence of William Vaughan and William Shirley.

The Governor asked a number of merchants in Boston and Salem to sign a petition in favor of the expedition, and thus the matter was again brought before the legislature, was again referred to a committee, and at last reported upon favorably and actually decided upon by a majority of one vote. What was the consequence of the vote of one man in this case? We shall see.

Let us look for a moment at the state of affairs in New England at the time. The harvest of the preceding year had been good and provisions were plenty. The winter was mild and the rivers and harbors were open, so that it looked as though a fleet might sail out towards the north. The Indians had not been troublesome and nothing was feared from them, so that the armed forces at the disposition of the colonies were not needed at home. The declaration of war had thrown a considerable number of fishermen out of employment and they were ready to offer themselves as volunteers in an enterprise that promised stirring adventure. As soon therefore, as it was decided that Louisburg was to be attacked, the movement became popular, and the people were even enthusiastic about it, seeming not to doubt for a moment that it would be a success.

The cordiality felt towards the enterprise was intensified as soon as it was determined to commit its direction to Mr. Pepperell, for he had the confidence of the people and was engaging in his manners as well as rich. Besides, he had acquired his wealth in the fisheries, was acquainted with the

region to which the expedition was to be directed, and was peculiarly interested in its success. Still more was the popular interest excited when it became known that Whitefield had given his commendation to it, and had furnished as the motto under which the soldiers were to fight, the words *Nil desperandum Christo Duce* (with Christ as leader, nothing is to be despaired of), as though it were a crusade upon which they were to go.

Every circumstance seemed to conspire in favor of Governor Shirley's enterprise. Three thousand men enlisted in Massachusetts; three hundred in New Hampshire; and five hundred in Connecticut. Rhode Island sent three hundred who, however, arrived too late for service in the siege. In addition, New York contributed some artillery and Pennsylvania a quantity of provisions, in spite of the fact that Benjamin Franklin ridiculed the undertaking, seeing, as he did, the absurdity, from a military point of view, of expecting success.

It has well been called a quixotic scheme. Governor Shirley gave Pepperell orders that seemed impossible to carry out. His hundred ships were to sail through icy seas that were often dangerous, towards a harbor that he had not explored. There they were to meet after dark, effect a landing in spite of the surf, march three miles in the gloom through bogs and woods, then commence pulling down pickets, and afterwards to scale the walls thirty feet high, and take the fortress!

When all preparations had been made with the utmost secrecy, so that no news should get to Louisburg (all vessels being forbidden to sail that way), towards the end of March, the Massachusetts troops sailed out of Boston harbor fortified by the thought that the prayers of the late Fast Day had been offered for their success, and that many of their churches would meet weekly to send up petitions for them as they went on their way.

So well had the secret been kept that it was the twenty-ninth of April before the garrison at Louisburg suspected what was to happen, and then they were alarmed to find that an enemy was actually upon them. Pepperell began the siege immediately, and on the first of May sent the dauntless William Vaughan to see how matters stood about the town. He marched up to the fortress and his men gave three cheers as they passed onwards. They afterwards burnt some buildings and the smoke frightened the French in the royal battery, who fled to the town a mile distant. Vaughan, of course, took possession of the battery, nailed a soldier's red coat to a staff, and sent word to Pepperell that he was waiting for re-inforcements and a flag.

Thus the first success was gained by the English, and their hopes were strengthened. Day after day the operations went on in a desultory way, such as might have been expected would be adopted by men not familiar with the science of

war. On the fourth of June a French soldier deserted and reported that if certain ships that were expected with men and ammunition should be taken, the fortress would be forced to surrender. Little did he suspect that the ship had actually been captured on the eighteenth of the previous month. Ten days afterwards, the French commander sent out a flag of truce and asked on what terms Pepperell would accept his surrender. The doughty New Englander replied at half-past eight the same evening that the proposition had reached him at a happy juncture to prevent the effusion of Christian blood, as he and the commander of the fleet had just determined upon a general attack. The next day, instead of a bloody struggle, there was a peaceful surrender of the town and fortification and territories adjacent to the King of England, represented by the fishermen and deacons, the farmers and other citizens of New England.

When Pepperell went inside of the fortress, he saw that the plan for surprising it, made by Governor Shirley, would have been futile. All were surprised at their success and sat down to a banquet provided for the officers by Pepperell with thankful hearts and good appetites. The grace was to be asked by old Parson Moody, who was uncle to Mrs. Pepperell. He was accustomed to be prosy on such occasions, and the officers were hungry enough to think that a brief grace would be better, but none was bold enough to ask Mr. Pepperell to make a petition to him, owing to his reputation for irritability. Judge of their astonishment when they heard the old man perform his function in the following sensible words: "Good Lord, we have so many things to thank thee for that time will be infinitely too short to do it; we must therefore leave it for the work of eternity. Bless our food and fellowship on this joyful occasion, for the sake of Christ, our Lord. Amen." The feasting and drinking that followed would not

be considered temperate in our times, for in those days everybody thought that no feast, even an ordination dinner, was complete unless there was a good quantity of rum to accompany it, and we cannot believe that the officers at Louisburg would drink less than a company of grave clergymen.

At one o'clock in the morning of the third of July the news arrived in Boston and before sunrise the bells were ringing and the cannon booming, while the streets were filled with citizens shouting their joyful acclamations of victory. In the evening there was an illumination; and a clergyman wrote to Pepperell that it was the finest he had ever seen in his life; that there "was not a house in town, in no by-lane or alley, but joy might be seen through its windows. The night also was made joyful by bonfires, fireworks and all other external tokens of rejoicing." The following Thursday was set apart as a day of thanksgiving throughout the province. In New York and Philadelphia there were bell-rings, salutes, and illuminations. The joy was also great in England. The messenger who brought the news was given a present of \$2500, and the cannon in the Tower of London and elsewhere were fired. All over England there were rejoicings similar to those that had been witnessed in America. As a reward for his share in the success, Mr. Pepperell was made a Baronet of Great Britain. It was the first time that the honor had been conferred upon a native of our country.

The weather had been fine during the siege, but afterwards it turned rainy and in the storms that followed the large fleet that were sent from France to retake the fortress were wrecked. Louisburg remained in the hands of the English through the war. The influence of this success was lasting, and when the Revolution broke out thirty years afterwards, there were found men who had gained experience at Louisburg who were ready to bring it to bear for the preservation of their liberties.

LITTLE BIOGRAPHIES.—HOW SUCCESS IS WON.

BY SARAH K. BOLTON.

XI.

DR. WM. T. G. MORTON.

WHEN William Murdock, of Birmingham, invented lighting by gas, he was ridiculed all England over. After using gas satisfactorily in his own house and shop, the lighting of a town was suggested, but Sir Humphrey Davy scorn-

fully inquired whether it was intended "to take the dome of St. Paul for a gas-holder!" And when the subject was brought before Parliament, one of the members exclaimed, "Do you mean to tell me that it will be possible to have a light *without a wick?*"

"Yes, I do, indeed," said Murdock.

"Ah, my friend," replied the educated legislator, "you are trying to prove too much!"

And when gas pipes were first placed in the House of Commons, the members put their gloved hands very carefully upon them, supposing that the gas passed along the iron tubes, on fire. No patent was obtained for the invention, Boulton and Watt, whose works Murdock superintended, being overwhelmed with their own lawsuits over the steam engine, and too busy to assist him. He died unrewarded for his great discovery.

When Doctor Edward Jenner of England, first discovered vaccination, and after many satisfactory experiments had been made upon his own little six-year-old son, the medical societies forbade his speculations upon the subject at their regular meetings under pain of expulsion, refused to try his process, accused him of an attempt to "bestialize" men because the vaccine was taken from a cow, and many clergymen pronounced it "diabolical." A few years after, when the method became popular, and Parliament voted him fifty thousand dollars for his boon to humanity, small-pox having been a dreaded scourge heretofore, and one hundred thousand dollars later—then several physicians claimed the honor of its discovery themselves!

Similar, in many respects, reads the history of another of the greatest benefactors of our race, the man who discovered anasthesia, or a way to render persons insensible to pain while undergoing surgical operations or in other form. In hospitals and on battle-fields, a few years ago, when limbs were cut off, the patients often died in the excruciating agony. Now, this dread aspect of human woe is changed. Under the influence of ether, pain is not felt.

For *this* blessed alleviation, the world still owes a great debt to Dr. Wm. T. G. Morton, an American physician, whose life was the same pathetic, heroic struggle as that of most thinkers and inventors.

Born in the little village of Charlton, Mass., August 9, 1819, Willie Morton, as he was called, a sunny affectionate lad, passed his early life like other New England farmer-boys, tapping maple-trees in the sugar orchard, mowing hay, shearing sheep, and getting such education as the town afforded. His mind seemed naturally to turn toward medicine, his young mates calling him "doctor," because he experimented upon them with bread pills, carrying them about in little vials made from elder branches. This early practice soon came to an inglorious end, when he nearly caused the death of his baby sister, by administering his "medicine" while she lay asleep in her cradle, whereupon he was severely administered to in another manner.

His father, always feeling keenly his own lack of collegiate education, determined that his son should have opportunities for study, and, at thirteen, sent him to Orford Academy, where he made his home with a well-known physician. Here he could spend his leisure in poring over medical books,

and in talking to Doctor Pierce of the pleasure he should some day have in his profession. The grave man would shake his head and say, "You hardly know what you talk about, and how hard I have to work." Later, he went to Leicester, using all his time in an eager search for knowledge; while other boys were deep in the sports natural to their years, he was peering and pounding among the rocks for minerals, or studying natural history.

It was when he was at Leicester that there came the first great sorrow of his life. His father, in an unfortunate business partnership, lost his money, and as a consequence William, at seventeen, must abandon his plans for an education, and at once go out into the world to earn his daily bread. This to a boy whose one ambition was study and research was a test-trial of the elements in his character.

And then, what could he do! His mother, a woman of unusual practical good sense set out with him for Boston. There she succeeded in placing him in the publishing house of Mr. James B. Dow, a man of sterling integrity. As was the custom at the time, the boy lived in his employer's family. Mrs. Dow, a noble woman, tried to make him contented, but he was so genuinely homesick that at last, fearing for his health, as it seemed impossible to overcome his despondency, he was returned to his father's house, where he remained for some time, learning as he had opportunity, and saving as much as he could for future schooling.

About the time he reached his twenty-first year, a college of dental surgery was opened in Baltimore. Other young men had made money in the practice of dentistry; perhaps he could earn enough, should he learn this business, to carry him through a medical course. For eighteen months he studied diligently, using a small sum of money left him by an aunt, and then boldly opened an office in Boston, where he made many friends, and did his work well.

Two years of earnest labor passed, and then from Farmington, Conn., one of the prettiest towns in New England, he brought a lovely bride of eighteen, Elizabeth Whitman, to share thereafter with beautiful devotion his struggles and his fame. It was about this time also that he entered the Medical School of Harvard University. At last, eight years after his school life had been so rudely broken up, he had reached the goal of his hopes.

With what delight he attended clinics in the wards of the Massachusetts General Hospital is well remembered by many; and it is recorded by Ben: Perley Poore, the journalist, that such was his devotion to his profession that "a skeleton was kept in his bridal chamber, and that rising long before sunrise, he used to prepare himself for the anatomical studies of the coming day." Late in the evening, he would be found last at the dissecting tables.

His sympathetic nature shrunk from the agony he had often to witness in the hospital. He asked him-

self a thousand times if nothing could be found to deaden pain. One day in applying sulphuric ether to a sensitive tooth of one of his patients, he observed that the surrounding parts became benumbed. At once he began to question whether the whole body could or could not be benumbed in some manner. But how, with safety! Sir Benjamin Brodie, a well-known scientist abroad, had written, "I have given ether to guinea-pigs, and it killed them!"

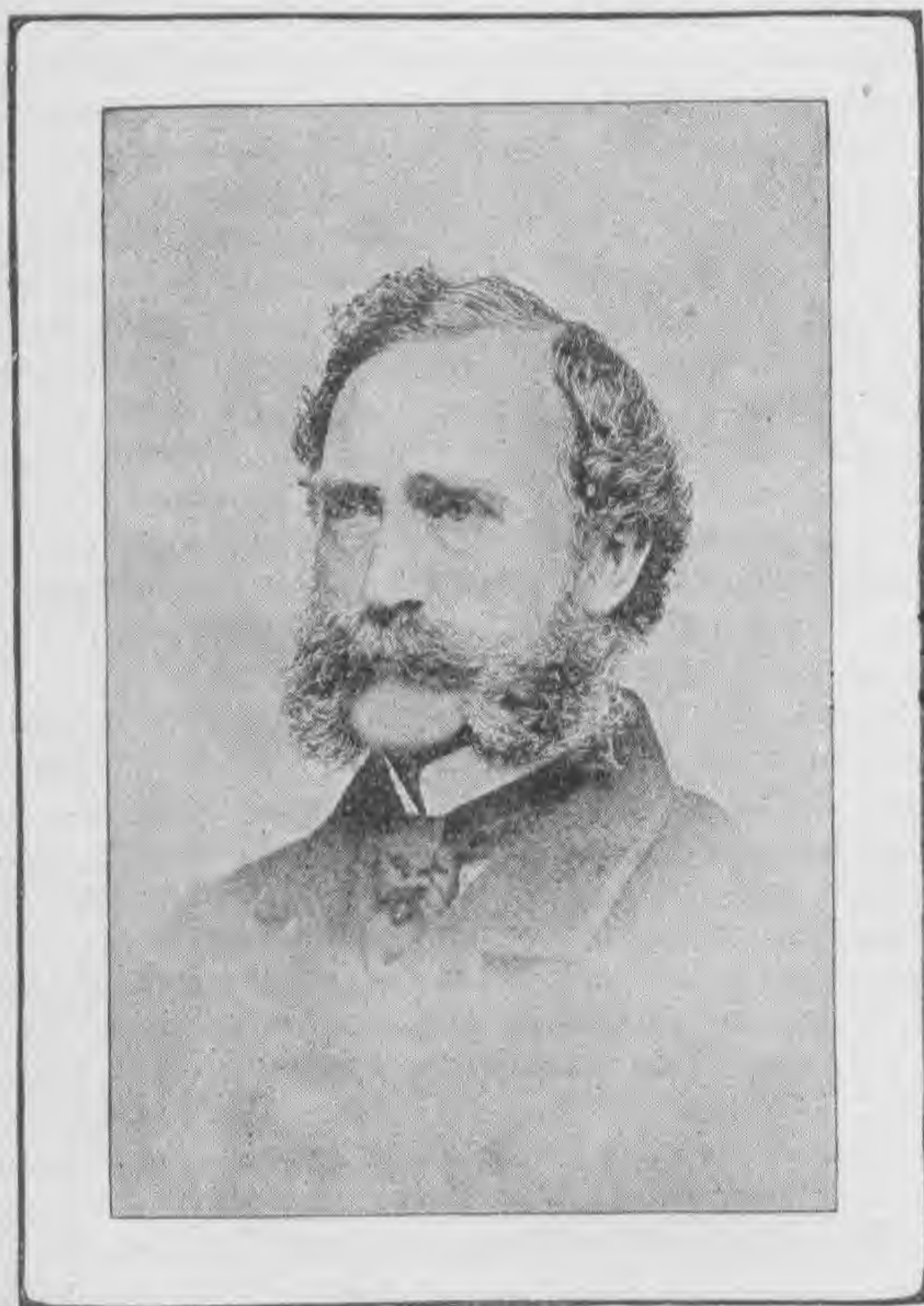
The young medical student determined to experiment upon — himself. If he died, the world would at least only say, "he was foolish." It took courage of a high order to mix, in the interests of science and

the sleep into which he knew he must enter, he said afterward :

I looked at my watch, then soon lost consciousness. As I recovered, I felt a numbness in my limbs with a sensation like nightmare, and would have given the world for some one to come and arouse me. I thought for a moment I should die in that state, and that the world would only pity or ridicule my folly. . . . Gradually I regained power over my limbs and full consciousness. I immediately looked at my watch, and found that I had been insensible between seven and eight minutes.

The young student was overjoyed at the result, and impatient now to try the effect upon others. Toward evening, September 30, 1846, a man came into the office nearly frantic with toothache, and ready to try anything in his pain; he inhaled the ether, and the tooth was removed before he was conscious of it. Young Morton was now fully confident that he had found the great "pain destroyer" of the world, and he at once began to consider how he should bring the knowledge to the public use? He wished that he might give one trial before the renowned physicians at the Massachusetts General Hospital. How else would they believe that a young student had found that for which learned men in all ages had been seeking — an annihilator of pain? And yet, what if by any possibility the experiment should prove a failure, and he should meet with ridicule? What if, indeed, the patient should die, and he be arrested and thrown into prison?

He called upon Doctor Warren, the senior surgeon, who expressed much interest; he said he had always hoped for the discovery, and that he would immediately give an opportunity for the test upon one of the inmates of the hospital. As the time drew near, young Morton applied himself night and day to continued investigation and continued test, and to the perfection of his instruments for inhalation. The night previous to the experiment at the hospital, he worked till four o'clock in the morning, to make sure that all was in readiness. His young wife of nineteen, who had watched every step in the progress of the discovery, was unable to sleep from her anxiety, and she met him as he came home, and implored him for the sake of herself and her little son, to give up the engagement. "You will ruin yourself;" she said. "You will be the subject of universal ridicule." He playfully rallied her failing courage, and then with solemnity and in tones of assurance said, "I will not fail. To-morrow the world will greet my success." With a reassured heart, but sleepless, she waited, while he, saying he had but two hours to sleep, almost immediately fell into profound slumber. At six he arose, and without breakfast hastened to the instrument-maker's, and thence to the hospital. The large amphitheatre was filled with distinguished surgeons, physicians, students and others invited to witness a difficult surgical operation which was to be undergone with-



DR. WM. T. G. MORTON.

humanity, morphine, opium and ether in a retort, put a hot towel around it, and slowly inhale it. But headaches so terrible resulted that he was obliged to discontinue experiments for a time. Like James Watt when working upon his engine, he scarcely knew whether he ate or slept; now experimenting with animals, and then again upon himself with pure ether. Finally, so firm became his faith in the knowledge he believed himself to have gained that he calmly soaked his own handkerchief in this liquid that killed guinea-pigs and deliberately placed it over his mouth and nostrils. As regards the natural question as to whether he would ever come out of

out pain. On every hand eager but incredulous faces. The patient, a young man of twenty-five, suffering with a tumor on the mouth, was brought in.

"Are you afraid?" said Morton to him. "No, I feel confident, and will do precisely as you tell me," was the reply.

Grave, but with perfect self-possession, the young student began his work. In four or five minutes the patient was soundly asleep, and then, in a silence like the tomb, with surprise and amazement growing on every face, Doctor Warren cut out the tumor, saying slowly and emphatically, "Gentlemen, this is no humbug."

When consciousness returned, the patient said, "I have experienced no pain, but only a sensation like that of scraping the part with a blunt instrument."

At once, doubt among the spectators gave place to joy and congratulations. The student had become in one brief hour, not only sure of fame and honor, but also the benefactor of every race, through unending ages, and those learned men recognized these facts.

Meanwhile the young wife was waiting at home in suspense almost unimaginable. About one o'clock he came, his bright, enthusiastic face tinged with sadness, as though he saw in the distance the hard fate and the long struggle to come. He seemed lost in thought as in a dream, and embracing her tenderly, he simply said, "I have succeeded."

But that meant that surgery had been forever robbed of its terrors, and good news of escape from pain was to go out over all the world from this memorable day, October 16, 1846.

Mr. Robert Hinckley, a distinguished artist in Paris, is now at work upon a large picture representing this impressive scene; the surgeons and physicians of the Massachusetts General Hospital grouped about the patient, and in the centre the manly face of young Doctor Morton, then only twenty-seven years of age. After the exhibition of the painting in the Paris Salon, and in this country, it will probably be hung in the same room in the hospital where this never-to-be-forgotten demonstration was made.

The new discovery was talked about everywhere, presently, at home and abroad. Said Doctor Warren: "It will awaken the gratitude of the present, and of all coming generations;" said Doctor Oliver Wendell Holmes: "The deepest furrow in the knotted brow of agony has been smoothed forever." English journals were eloquent in its praise: "It is a victory not for to-day nor for our own time, but for another age, and all time; not for one nation, but for all nations, from generation to generation, as long as the world shall last."

Doctor Morton understood well the value to the world of his discovery, and he spared no pains to spread the knowledge everywhere. Pamphlets were published at his own expense, giving examples of

the safe use of ether; agents were sent into all the larger cities and towns to instruct people in its use, and with proper instruments. Says his lawyer, Richard H. Dana, jr., the author of *Two Years before the Mast*: "Doctor Morton hardly knew a full night's rest, or a regular meal, for three months."

But he had but just begun his struggles, his bitter experiences. Several dentists at once issued a "circular," to physicians and to the newspapers, setting forth the alarming effects of ether, and upbraiding him for announcing the discovery of a "humbug." Some of his medical brethren, too, seemed to be envious, and hoped "no one would be reduced from the high professional path of duty, into the quagmire of quackery!" Even some religious teachers called it "a decoy of Satan," because God had condemned man to suffer pain, and "it would rob him of the deep earnest cries which arise in time of trouble for help!"

All this incited the young physician to greater energy. Having already been at so much expense to introduce the new agent and defend it, his friends advised that he apply for a patent, that he might reap some necessary pecuniary benefit from his discovery. This was granted; but the Government soon using ether in the Mexican War, yet paying no regard to the patent, contracts made with other parties were boldly broken, and much loss fell upon Doctor Morton. At once prominent men, among them Doctors Warren, Bowditch, Bigelow, Holmes, Parkman and others, asked Congress to reward the author of this great boon to his country. It had given the heirs of Robert Fulton over seventy-six thousand dollars for his improvement in the steam-engine; to S. F. B. Morse, eighty thousand dollars for the telegraph; to one firm twenty-five thousand dollars for the right to use the improved method of refining gold bullion; to another twenty thousand dollars for elevating and pointing heavy cannon; surely the Government would give generously to him, who, Lecky declares in his *History of European Morals*, "has done more for the real happiness of mankind than all the moral philosophers from Socrates to Mill."

But now came the most disheartening trial yet, the same which had confronted Jenner and Watt and Morse and Harvey: several men came boldly forward and declared themselves the discoverers of the way to produce insensibility to pain! One said he had known it in his laboratory for five years. To this Doctor Jacob Bigelow well replied: "If he did make the discovery, as he asserted, he stands accountable for the mass of human misery which he has permitted his fellow creatures to undergo," during all this time. Another said he had used nitrous oxide in extracting teeth and deserved to be considered the discoverer, though he had gone out of dentistry, and given up experimenting. Others still claimed to have had this knowledge—only they had failed to make it known.

Immediately the contest against Doctor Morton became bitter and personal. As a result, the bill to give him one hundred thousand dollars, which had been passed by the House, was lost in the Senate.

This was a bitter disappointment, a most bitter experience. That any person could lay claim to this discovery, which he had worked out with almost infinite labor, hazarding his life and reputation with fearlessness, or say, as did one physician, "I told it to him," seemed to Doctor Morton unexplainable. He had spent all he had earned and more in his work, was deeply in debt; and now, when only twenty-nine, he became ill from nervous prostration.

He could not solve the problem — while lavish sums were spent on every new invention for slaughter, there was not a penny for the man who by his discovery had saved thousands of lives, and prevented incalculable suffering.

When partially restored to health, friends furnished the means for a second petition to Congress. Daniel Webster, Charles Sumner, Rufus Choate, Governor Marcus Morton, were among his warm supporters, but while the Legislators said by a decisive report, "Doctor Morton is entitled to the merit of the discovery," in the rush of the closing session, no appropriation was made.

Once more, well, cheerful and hopeful, sustained by his devoted wife and friends, though the new claimants published their claims both at home and abroad, Doctor Morton, ten years later, with an immense amount of testimony from the highest in the land, made his third application to Congress. It would seem that there could be little doubt about the sequel now, since two select committees of the House of Representatives had reported in his favor; the Military and Naval committees were on his side; and the Trustees of the Massachusetts General Hospital, with one hundred of the leading men of Boston, had sent him one thousand dollars, with their autographs, in a silver casket, with the words:

"In honor of the Ether Discovery, September 30, 1846. . . He has become poor in a cause which has made the world his debtor."

But no sooner was the subject broached in Congress, than different members argued the claims of their constituents; one branch of the Government passed a bill only to have it rejected in the other, until everybody was worn out with the discussion, and the matter was allowed to drop unheeded. Doctor Morton went home dispirited, and was attacked with a severe illness. For eight long years, with loss of business and failing health, he had fought this battle for his rights in vain.

There had been one joy in all this disappointment and depression and defeat; one bright spot in the darkness; at Etherton cottage, Wellesley, Mass., where lived his wife and four pretty children, he had always come home to rest and peace and love

and perfect trust and sympathy. Close to his home was that of his tenderly loved mother, whom he visited regularly every night after his return from business in the city; and there he could forget for the time the indifference, the heartlessness, and the selfishness of the world. But now misfortune came even to Etherton. The home with its fine library, its perfect collection of surgical instruments which he had spent years in gathering, had to be mortgaged and its treasures sold.

Feeling how sadly his country had wronged and neglected him, such noble men as Doctors Bigelow, Bowditch and Holmes, Robert C. Winthrop and Longfellow, and leading physicians in every city, started a Morton Testimonial, which by generous contributions should show how deeply indebted the whole world really was to this one man. All gave heartily; but the Civil War soon absorbed the thought of the country and prevented the raising of a large amount.

Fourteen years had now gone by since his discovery of ether. Doctor Morton, at the wish of the Government, had hastened to our battle-fields, and sometimes after a single battle had given ether or chloroform to two thousand wounded men, before the surgical operations were performed. At the Wilderness and Spottsylvania Court House, with General Grant, where twenty thousand were wounded, he had given anæsthetics, at the rate of three minutes to the man, without a single failure. The hospitals of London, Paris, Vienna and Berlin were all using this wonderful blessing. One can but pause again and again and reflect upon this instance of national ingratitude.

One year after Doctor Morton discovered the use of ether in destroying pain, Doctor Simpson of England had brought out another agent, chloroform, which, though valuable, is dangerous, and its use forbidden in most hospitals. For this England, proud of the discovery, knighted him, and at his death buried him in Westminster Abbey. For Doctor Morton — who discovered an inhalant safe as well as powerful and in use nearly the world over before chloroform was discovered, what has his country done? Absolutely nothing, save to leave his family in want, and himself unrewarded. Once more, wounded soldiers, Generals, Doctors, College Presidents and Medical Societies united to ask Congress for an appropriation of two hundred thousand dollars for Doctor Morton. Doctor Willard Parker of New York said, "He has laid the civilized world under an infinite obligation, and exhausted his means by so doing;" President Chadbourne of Williams College said, "In my judgment he has been grossly wronged in the preposterous claims of others, and in the long neglect of the American people to make him some compensation for the honor he has conferred upon us." The old opposition was at work, however, and Congress did nothing.

Such injustice could not but have its effect upon the strongest body and the most courageous heart. True, he had reached the best success, that of imperishable fame as a benefactor, and had received the largest gold medal of the Institute of France; the "Order of St. Vladimir" from Russia, the first, it is said, ever bestowed by Russia on an American; the "Order of Le Vasa" from Sweden; but anxiety for the welfare of his family, a sense of wrong treatment and unfair dealing, broke his health and his heart. One year after, with a public funeral, as befitted his great service to humanity, Doctor Morton was buried in beautiful Mount Auburn, Doctor Jacob Bigelow writing these expressive words, now upon his monument, erected by the citizens of Boston:

W. T. G. Morton. Inventor and Revealer of Anæsthetic Inhalation. Before whom in all time Surgery was Agony. By whom Pain in Surgery was averted and annulled. Since whom Science has Control of Pain.

In the attractive Public Gardens of Boston, stands the Ether Monument, of granite, the gift of Thomas Lee, with a fine bas-relief on each side, and the words: "*To commemorate the discovery that the inhalation of ether causes insensibility to pain, first proved to the world at the Massachusetts General Hospital in Boston, October, 1846.*"

Mrs. Morton, with her five children, was left at her husband's death, to struggle on, as best she might. Doctor Sims of New York, for many years her husband's warm supporter, now suggested that he would try to secure from Congress two hundred thousand dollars to be equally divided between Mrs. Morton and the widow of another claimant. Though her beautiful home was in the market for sale, in

order to obtain means to support and educate her children, though her own health was shattered, though before her was the probability of poverty while life lasted, she said to a friend, "The prospect of one hundred thousand dollars gained by the sacrifice of my husband's just claim, or indeed any amount of money, presented to me not the slightest temptation," and she of course declined Doctor Sims' proposal. And a little later the lovely home at Wellesley was sold.

The children are now grown-up, grown up to a heritage of honor and to honor in turn the famous name they bear. The oldest son, Doctor William J. Morton, graduating from the Boston Latin School at seventeen with the first prize, from Harvard University at twenty, and later from the Medical Schools at Harvard and Vienna with honors, practising for two years in South Africa, stands now one of the leading men in his profession in New York City; President of the Neurological Society, a member of the medical department of the University of the City of New York, and Professor in Vermont University. The youngest son, Doctor Bowditch Morton, named for his father's devoted friend, a graduate also of Harvard, is universally esteemed for his ability and successes already won; Mrs. Morton lives in the happy home of her oldest son.

But though America has never paid Doctor Morton the debt she owes him, though he died in sadness, count his life a success—the imperishable good of it is secured to humanity. His patience and perseverance, his courage and hope, his indomitable will and unflagging energy, under the most trying obstacles, in the light of his achievement, remain also a legacy, almost as priceless, of inspiration to those who are struggling unaided, either in the development of science, or the progress of philanthropy.

IN CASE OF ACCIDENT.

BY DR. D. A. SARGENT.

XI.

THE LUNGS.

THE lungs are two soft spongy elastic bags lying in the chest cavity just above the heart. They are connected with the outer air by means of closed tubes which start from one trunk in the throat, the windpipe, and divide and subdivide into smaller and smaller tubes, as do the branches of a tree.

If you will imagine a tree inverted, and that all its limbs, branches and twigs are hollow, and that the leaves themselves are little hollow elastic bags, the resemblance will be complete. In the lungs these little bags, called air-cells, are surrounded by a network of minute blood capillaries. The walls of the air-cells and capillaries are so thin that there is a constant interchange of gases taking place between the blood and air.

The dark purple venous blood that comes to the lungs from the body is laden with carbonic acid,

while the air that passes into the lungs from the atmosphere consists largely of oxygen. The blood in the capillaries gives up its carbonic acid to the air in the lungs, and receives from the air oxygen in return. The lungs pump out the carbonic acid, and take in a new supply of oxygen. This process of pumping, or breathing, as it is called, is carried on by the alternate expansion and contraction of the chest.

Oxygen is essential to life, and carbonic acid, beyond a certain quantity, is destructive to it. Therefore, anything that occurs to interrupt the breathing process is quickly followed by results more or less serious.

Let us consider some of the accidents that are likely to interfere with the function of the lungs.

DROWNING.

This accident is of frequent occurrence during the summer season. The best means of preventing it is to learn how to swim; by so doing a person is not only better prepared to save himself, but to render assistance to others. The body is lighter than water, and under ordinary circumstances will not sink if the greater portion of it is kept submerged. The lower part of the face is the only part that need be above the water. But if the arms are thrust into the air, and at the same time the lungs should be emptied by shouting for help, the person is almost sure to go under.

If in attempting to get his breath the unfortunate person swallows water, and plunges about, the risk of drowning will be increased.

As a rule, keep the head well back, breathe quietly, paddle gently with the hands and tread with the feet; thus, even if you do not know how to swim, you can keep yourself afloat a long time or until assistance comes to you.

In attempting to rescue a person who is in danger of drowning, you should be very careful when coming into immediate contact with him, especially if he be heavier and stronger than you. Remember the old adage, "A drowning man will catch at a straw," and throw him something that will enable you to assist him; an oar, a rope, a fishing-rod, a cane, an umbrella, a neck-tie, one of your braces, a coat, or any article of clothing, will answer for this purpose.

If the person is too exhausted to hold on to an object, you can grasp his foot or hair and thus draw him to the shore. Sometimes, where presence of mind has not entirely deserted the person in danger, he can greatly aid himself by endeavors to do as you direct him. If he would lie quietly on his back, or place both hands upon your hips, it would not be difficult to swim with him. This can be tested and verified, and also rendered easy to do in time of need, by practice while in bathing.

If in spite of your best efforts to save the unfortunate person, he sinks to the bottom, you will of course attempt to raise him and get him to the shore before life becomes extinct.

Realize what has happened. The breathing has stopped, the face and neck are purple and swollen with venous blood, and the life of all parts is suspended for want of oxygen. The first essential to life is to restore natural respiration. There are several ways of doing this.

The method usually employed is known as "Sylvester's method." Before speaking of this it would be well to consider two or three things which should *not* be done.

Do not roll the person over a barrel; *do not* place him head downward; *do not* lift him by his legs in view of getting the water from his lungs. These are barbarous practices and do more harm than good.

The person should at first be laid on his stomach, supported by a cushion or bundle of clothing, with the head just low enough to allow the water that has collected in the mouth and throat to run out. The wet clothing should, of course, be speedily removed, and the body covered with blankets or dry clothing.

In order to give the air a free entrance into the windpipe, the mouth and nostrils should be thoroughly cleansed, and the tongue be drawn forward and fastened with an elastic band or strip of cloth passed under the chin.

Neck-tie, braces, collar buttons, and anything likely to interfere with respiration should be taken off.

Sometimes natural respiration may be excited by tickling the throat with a feather, applying smelling salts to the nostrils, or by dashing hot and cold water alternately over the face and chest.

If the person has been for some time under the water, however, it is better to try artificial respiration at once.

Place the patient on his back on a flat surface with a roll of clothing under his shoulder-blades. Get behind the patient, grasp his arms just below the elbow, and draw them gently and steadily upwards until they meet above the head. By means of this movement the ribs are raised, a vacuum is created in the lungs, the air rushes in, and the process of purifying the blood by giving it oxygen and taking away its excess of carbonic acid has begun.

After keeping the arms in this position about two seconds, they should be brought down to the sides and pressed against the ribs over the pit of the stomach, and held for two seconds. This movement contracts the walls of the chest, and forces the impure air from the lungs. The upward and downward movements of the arms constitute the act of respiration, and should be repeated about fifteen times to the minute.

This process should be continued until natural respiration begins.

Meanwhile efforts should be made to induce circulation and warmth in the body and limbs. This can be done by vigorous rubbing, by warm bathing, and by beating the body smartly with a towel.

If the breathing continues to improve, get the patient into a warm bed as soon as possible.

Cover him with hot blankets, and apply heated bricks, or bottles of hot water, to his stomach, armpits, thighs, and feet.

As soon as the respiration and circulation have been fully restored, and the patient is able to swallow, warm drinks may be given in small quantities at a time, followed by a little beef-tea or other easily digested nourishment.

As accidents from drowning are frequently attributed to cramps, spasm of the heart, etc., which are induced by unfavorable conditions of the body, a few words of caution to bathers may be of service: Never bathe within two hours after eating, when exhausted from fatigue, or when perspiring from vigorous exercise.

If simply warm because the temperature of the air is warm, do not stand around to cool off, but enter the water as soon as you are undressed.

Do not remain in the water more than ten or twenty minutes at a time, and leave it before this, if there is the slightest feeling of chilliness.

Persons who are subject to fainting fits, palpitation of the heart, disorders of the circulation or nervous system, should never bathe alone, or swim beyond the reach of immediate assistance.

SUFFOCATION.

Suffocation, in its effects upon the lungs, is very much like drowning; in the one case the passage to the lungs being closed by a gas, in the other case by a fluid.

Suffocation is generally caused by the inhalation of noxious gases, such as charcoal vapor, coal gas, water gas, sewer gas, carbonic acid, etc.

Some of these gases are hard to detect by sense of smell, and persons who are exposed to them are often overpowered before they are aware of their presence. In other cases, a sudden sense of suffocation is felt, accompanied by dizziness and inability to stand. The heart becomes feeble, consciousness grows dim, and death follows unless relief is soon at hand.

When a person is known to have been exposed to noxious gases, the first thing to do is to give him access to fresh air. If he is confined to a room with windows that can be reached from the outside, break them in as soon as possible. Then open the door from the inside and let the air draw through. After a few moments you can enter and remove the patient. Where the room cannot be reached from the outside, it should be entered with great caution. Open all the windows and doors in the adjoining rooms, then throw open the door of the room containing the unfortunate person.

While others are fanning the doors, to create a current of air, take a full breath, then cover the mouth and nose with a wet cloth or handkerchief, and rush in to the rescue. Open or break the first window you come to and take another breath of fresh air. While the lungs are inflated, endeavor to drag the suffocated person into another room out of danger.

Then the work of resuscitation should be begun at once. Artificial Respiration is the first essential, and the method of procedure should be the same as described for a case of drowning.

The nature of the noxious gas, if known, should of course guide you in your endeavors. If for instance illuminating gas is suspected as the suffocating medium, you should not enter the room with a light. Upon the other hand, if carbonic acid gas is suspected, a lighted candle will go out if a large quantity of this gas is present. Sometimes sewer gases are inflammable, and many damaging explosions could no doubt be traced to these noxious vapors.

Care should be taken, therefore, in approaching a room containing any kind of gas whose nature and properties are not clearly understood.

Remember that carbonic acid gas is heavier than air, and when found in wells, cellars, pits, etc., is always strongest at the bottom. Efforts should be made to mix it with atmospheric air by agitating or disturbing it, before attempts are made to rescue those who may be overcome by it. It may be shaken up by throwing large quantities of water into it, by firing a gun over it, or by throwing burning paper, or other inflammable material, into it.

The greatest caution must be taken in endeavoring to rescue a person from a deep hole or cavern containing this deadly gas. The use of a sub-marine armor, such as is employed by divers when working under water, is the only method by which one can render assistance with safety.

ANNA MARIA'S HOUSEKEEPING.

BY THE NEXT NEIGHBOR.

XXIII.

CHURCH PICNICS.

SO you are on the committee to supply refreshments for the festival to which the Sunday-school looks forward. A good report of your housekeeping at home will certainly bring your abilities into demand in this way. Nowadays every woman is likely to be brought into semi-public duty of some sort, in the host of temperance, church and Sunday-school festivals, charity fairs and suppers, soldiers' lunches and school reunions, so it must be part of your education to know how such things should go off.

Like everything else in this world, this refreshment business is best begun pencil in hand, so that at every step you may know just where you are. For each hundred persons who attend the picnic, or the excursion, which is the name for the old "Sunday-school celebration," your committee must secure a certain amount of food, which the families of the congregation agree to provide. Experienced housekeepers know pretty well how much a given number of hungry people will eat, and your Sunday-school friends should find a liberal supply, for no church should ever bear the reproach of stingy doings in its festivals. The first injunction ever given for such matters and the only one needed, should hang in every vestry and committee room, and every Christian take it to heart: "*Let everything be done decently* (that is respectably, or handsomely, as the Greek would be rendered to-day in our own phrase) *and in order*;" that is systematically, which I grieve to say is not the case with too many church social affairs. The providing is left to an unexperienced young lady committee who don't see all the families in time to allow for preparation, and who leave each person to bring what seems good or convenient. The consequence is, a surfeit of cake, but only half enough sandwiches, and those of a hasty lunch-counter variety, four dozen loaves of gold cake and bushels of doughnuts, but not crisp cookies enough to go around, or half enough lemonade. People eat more cake than agrees with them, and have headaches and feel faint before they go home for want of relishing and right food. The bolder children are stuffed till an after-course of jalap and senna would be highly proper, while the timid ones go hungry on a slice of cake and half a roll, and too many of those who attend go home feeling as if they

never wanted to go to a Sunday-school picnic again. Now a leisure day in the woods, or on the seashore, with fresh air and change of scene, as well as change of food, ought to leave people with fresher, better feelings, and it is sheer waste of time, efforts and parish cake, if you don't send them home the better for coming. At least see to it that your part of the entertainment is well done, for the most fastidious are apt to go home satisfied if they have had something good to eat. The credit of the church depends on your way of taking up a duty, which too many persons slight, and very few understand. Please to understand that the object of the picnic, or wood-party, or excursion, as you choose to call it, is not to give one because other churches do, or to raise a few dollars for the library, or a church stereopticon, nor yet to draw scholars to your Sunday-school. None of these; but it is the reminder of the Jewish feast of tabernacles, the day of gladness in open air and sunshine, in rest from toil, and friendly gayety, in light feasting, which stores up strength for the resting frames to take to the daily work of the next weeks. Yes, you may smile, but the underlying fact of all our social feasting, the reason why all our holidays and rejoicings are celebrated with richer and more varied eating, is that in the repose of muscle and lightness of spirits, the body can digest and accumulate a little surplus of strength to meet the wear of life again. As the good dinner Victor Hugo gave poor children once a week kept up their health in spite of every day privations, so every holiday ought to freshen us for the stress of work and business. It is a failure if it does not do this, and if our parish festivals do not come up to the mark, it is time we made them what they should be.

And first, see that your party have enough to eat. As you wish to provide liberally, every hundred who come will need the following amount, the same or in kind: Either one hundred and fifty sandwich rolls, or eight large loaves of home-made bread made into sandwiches; if made as they should be, most of your party will prefer these to sweet things, excepting only the juvenile cake-sharks. The bread should be baked only the day before, cut very thin, not buttered, but spread with beef or ham, chopped fine as if grated, and mixed with salad dressing. The sliced sandwich is not easy to manage neatly without plate, knife and fork. If rolls are sent, part of the inside should be scooped out and filled with the sandwich mixture.

If cold meats are to be served, your hundred will

call for two small hams, or twenty-five pounds beef, five cold tongues sliced thin, and a dozen large chickens. Salad is relished by everybody, and is not expensive, as veal and lamb may be mixed with chicken, while fresh chopped cabbage, beets, hard eggs, parsley and a dozen other ingredients may combine with the celery and lettuce. Salmon salad, or fresh white fish salad, will give variety, and, in serving, salad only calls for saucers and spoons like ice cream. If you want to manage with least trouble and risk, instead of borrowing the plates and silver of the entire parish, let the committee order a gross of wooden plates and saucers, which come at a good deal less than a cent apiece, and will last a number of picnics. With paper napkins in plenty, things are more civilized, and you will find a load of care off your mind in borrowing and returning things. If anybody desires better, it is open for them to bring their own napkins, fork and spoon as used to be the custom of good society at all feasts only two hundred years ago.

As long as the great American picnic-goer likes pickles, you may as well provide them, for the relief of possible bilious tendencies. If I mention two gallons of home-made pickles, let them be in variety—cucumbers dark with spice or yellow with mustard, bunches of barberry, cauliflower, sweet pickled peaches, cherries, plums, but all well-drained and convenient for handling. All pickles or preserves for picnics should be put up with stems on.

Take a few loaves of bread and a box of butter for people who prefer plain bread and butter with their chicken and cucumbers. It is much nicer freshly cut and spread as wanted. Mild cheese, cut into two-inch bits half an inch thick, will carry well in a napkin in a tin box. Five pounds will probably be enough as the liking for cheese is not universal. Eggs take well in shape of egg sandwiches, sliced when hard boiled between very thin slices of bread and butter, so does veal loaf, which is chopped veal bound together with beaten egg, and flavored with herbs, then baked in bread pans so that it can be sliced.

No, I shall not forget the cake, and you may depend on its being the only thing that other people will not forget either. It is easy knowing how much to provide. A common scalloped cake pan, ten inches across, will give eighteen good slices, a brick pan of the same length ten slices or fifteen as you choose to cut them. Rich fruit and black cake are not cut over half an inch thick. A dozen loaves in all of cup cake, sponge, chocolate, fruit and lady cake, should be enough for one hundred people, with one hundred and twenty-five little cakes baked in patty pans, which may include pound and currant, Dundee and Marseilles cakes. Twice as many cookies, jumbles, ginger snaps and Brighton biscuit, will prove enough for the most hardened picnic eaters. Jelly cake and fruit tarts are certain

to be called for by every one, so ask to have plenty of them, if any are furnished. Where a dozen or twenty families do the baking, it is as little trouble to have things in proportion as to have loads of frosted pound cake and only two or three of anything else.

Beverages in variety are too much trouble for large volunteer parties. Content yourself with lemonade not too sweet, and plenty of ice water for everybody, taking two or three clean casks or kegs along and a basket of cheap tumblers. It is better however for everybody to bring small baskets with napkins, cups and spoons, or whatever extras are fancied. Remember it takes three large lemons to make two quarts of lemonade with the most economical skill, and calculate accordingly. If you must manage, with fewer lemons than you like, press them with a lemon squeezer at home and pour boiling water on them, a quart to a dozen lemons. Carry this, lemons and all, in a covered jar, set in a wooden pail, and strain through a linen cloth into the ice water, adding to bring up the strength if required, two or three teaspoonfuls of powdered citric acid, not tartaric. Citric acid is condensed lemon juice anyhow. And don't let any one spoil the lemonade by using anything but white sugar in it. Citric acid and white sugar with the grated peel of three lemons will make better lemonade than the washy stuff usually served, where a dozen lemons float in slices on a half barrel or so of tepid water which tastes strongly of muscovado sugar. Bottled lemon soda, and cold tea with thin slices of lemon in it, with sugar but no milk, are popular, but do have them iced, for flat beverages well sunned in July air savor too much of cheap excursions. Iced milk with the cream in may be taken in jugs, but the best way of carrying all such things is in a half-barrel or firkins, half filled with pounded ice and sawdust, in which the bottles, jugs and pails can be set, the whole covered with many layers of paper, and a piece of carpet.

Pack the plates and saucers with layers of clean paper between each two, and have thin bars of wood fastened over the top of the basket to hold the pile firmly, that it cannot shake and break. Insist that all the tablecloths must be marked with the owners' names, and all the tableware can be marked with initials by a match dipped in turpentine varnish and lampblack, or any black paint that will not wash off at once. An hour spent at the vestry marking all things sent will save a week's trouble hunting and returning stray articles, beside endless heart burnings over lost property.

If you must have hot tea and coffee, or hot bouillon or chowder, which are popular picnic fare in different parts of the country, the easiest way to get them up is to carry a kerosene stove and light it in the wagon which takes the baskets. A shelter is easily rigged in the fashion of emigrant wagons, with a light frame covered by unbleached cotton

or awning cloth, which makes the cook business lighter, for it is no easy matter to boil coffee and make soup with the wind puffing smoke in one's face from every quarter.

If you want the older ladies to enjoy the picnic, and go home without fatigue and neuralgic twinges, provide all the canvas camp-chairs, mats and pieces of carpets possible to give people easy seats. Hammocks and swing-chairs add much to the real comfort of such parties, for to tell the truth, most of us elders enjoy our easy-chairs out of the draft, on our own shady piazzas, better than any picnic between here and Galveston, and the younger folk are not averse to something better than a backless seat on the ground, with the damp striking through thin dresses.

It ought to be understood that a simple, durable style of dress is the only one for picnics and wood parties. Let white muslin and organdy suits be frowned down as bad taste, and pretty summer flannels, satines and prints be worn instead. With bright ribbons and flowers such dresses are festal enough for any occasion of the kind, nor should wraps be forgotten in case of sudden change in the weather. Have these all ticketed with the owner's name on a tag, tied up in close parcels and sent in the store wagon with the baskets and picnic equipage generally. A locked box will prove the safest thing to carry them in and it should be the business of some careful young fellow to look after the contents and deliver them, as an expressman hands out parcels. If your party is a large one, of a hundred or over, a system of checks for wraps will be the easiest and safest for everybody. You can't have any fun without these cares, and it is so much easier taking care before than after — always. A summer shower comes up, or the wind changes, and people are distracted trying to find shawls and cloaks, unless they "hang on to them" as the prudent ones do, and spoil their comfort carrying wraps round all day.

What is left at picnics ought not to be wasted in the wholesale manner common. I have seen

wagon loads of young people pelting each other with the half-hundred cream cakes left from lunch, and after a soldiers' lunch furnished by the town ladies on parade-day, the regiments have flung barrels of sandwich rolls at each other for sport. Good taste and thrift forbid such monkeyish performances. What is left should be at the disposal of those who sent it, if they can distinguish their own cake and rolls, or it should be neatly packed and sent to families where such a treat would be acceptable — to those who stayed at home with young children and the sick, or to people who didn't think themselves good enough to go to picnics, and who don't have cake every day. The débris, instead of disfiguring the grounds, should be collected in a box and go to somebody's chickens, for the sake of keeping the picnic grounds orderly, and no stray papers or tin cans should be left as traces that well-bred Christian people had been feasting there.

Why not send things to the minister? Of course you send them, not because the minister's family is a dependent and beneficiary of the parish, but because a good deal more is expected from them than other folks, in the way of entertaining and giving time to others, and it is only just you should help them in every thoughtful way. With people coming to dine, or take tea, almost any day in the week, it will be a decided help to have loaves of nice cake that will keep for weeks in the cake box, or a basket of rolls and cookies that make luncheon easy for days. You do not know how the minister's wife has her time broken by calls on parish matters or charity, so that it is not always easy for her to do a forenoon's baking uninterrupted. She will do her work, and your work, better for all the helps and attentions thrown in her way. But don't forget the washerwoman, and the poor family down by the mill who never come to church, or the old ladies who live alone, or the sick mother whose family of boys are doing the housework the best they can without her, or the sewing women who live on a cup of tea and bread mainly. The fragments are sometimes the best of the feast.

WAYS TO DO THINGS.

BY MARGARET LAKE.

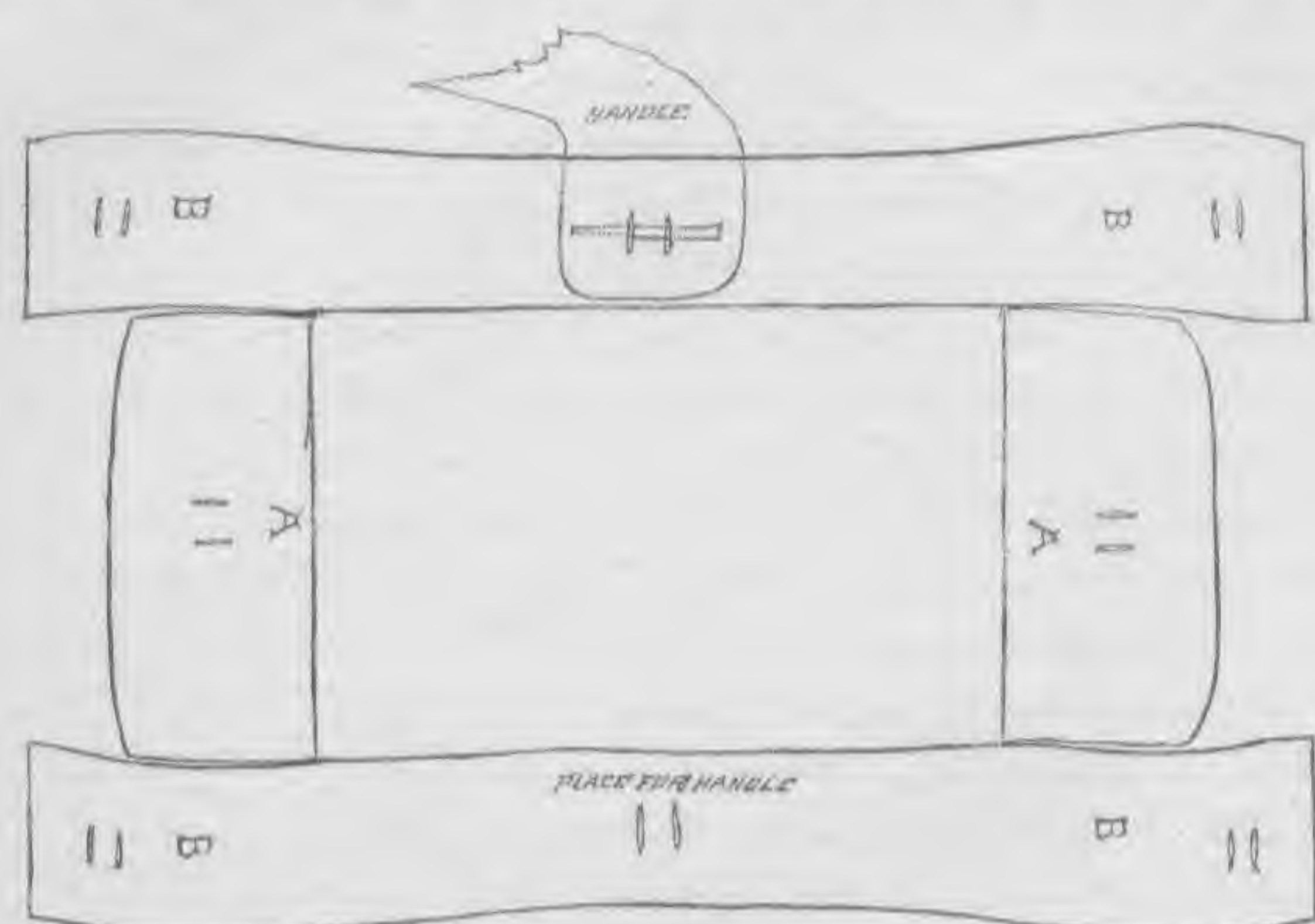
XXV.

BIRCH BARK ARTICLES.

THE prettiest hanging-basket for plants I have ever seen is made of birch bark. That special use, however, did not enter into the head of the

person who fashioned it, said person being a boy, who happened, while off in a distant pasture where he went to salt the sheep, to find plenty of ripe blackberries when, unfortunately, he had nothing to carry them home in. But, nothing is truer than the old writing-book copy which says that "Necessity is the mother of invention;" so, like a bright, Yankee

country boy, never lacking in ways to do things, never at a loss, he hunted up a strip of birch bark and then and there made this basket. When, not long afterwards, it came into my possession, I saw



DIAGRAMS OF BASKET.

at once what was its manifest destiny, and put it to esthetic use. I filled it with wet moss, over that putting a layer of earth, and set therein oxalis, the little roadside vine called "gill-go-over-the-ground," and pieces of that accommodating plant which will grow for anybody, the *tradescantia*, better known as "wandering Jew;" packed all close, and hung the basket up, and from that day to this it has been "a thing of beauty" and a daily joy.

Birch bark is wonderful for resisting decay. That basket has stood the test of all the sunshine it could get, and all the water it needed, besides many a drenching and deluging out in a pouring summer shower, and all the wear of five years, and is as good now as on the day it was made. It is not breakable, or tarnishable, or rustable, or spoilable in any way. Nothing has befallen it except that the wooden pins (shaped like a thorn), which fastened it together, have just rotted and given way.

Before replacing them with new ones, I have, this very day, taken the opportunity to remove the contents and see just what the shape of the piece of bark was before it took the form of a basket.

So, spreading it out flat, I have cut a rude pattern from it for your benefit. Here it is, just as the boy cut it out with his jackknife. I think he showed excellent taste, and a pretty good eye for symmetry.

I measure it, and find he had a strip about fifteen inches long, and about ten wide. You can use a smaller one, if more convenient for you; but this is just right, and of the size and style of those verbenas baskets the florists use; though by the by, I am certain that the boy never saw one. The handle is fifteen inches long, and cut in a neat strap fashion. The pins were to my mind a triumph of rustic art, made of strong green twig, from an apple-tree, or black birch, or something with dark-colored bark, about four inches long and neatly sliced away

at one end. These held the basket together, or, in other words completed it, made the thing a basket, which when done was strong enough to carry pebbles in if you chose to do so.

By the lettered diagram you will see just how the thing is done. The flaps at the ends marked *a* are turned inward, and the others marked *b* are lapped by it on the outside, making the corners fit perfectly, without so much as a crevice; then through the slits, cut as you see, the pins are slipped, in and out, showing on the outside; and there you have it. The handle is secured in the same way, by pins through slits towards the end, which correspond to similar ones in the side.

The uses for such a basket will readily suggest themselves. Besides the one for which I appropriated mine, how nice to fill one with wild flowers, or mosses, to send as a present to a friend, or to gladden some invalid doomed to the confinement of the house, but with a heart full of longings for the green woods and the pasture knolls!

There are other ways of making baskets to hold berries and small fruits, or flowers. I have seen one shaped like a dory; and the mention of this will immediately make you think of several boat shapes, and tray shapes. If you are inventive or imitative, you will copy or devise something worth having.

Another pattern for a hanging basket is called the "canoe," though it will not strike you as a very good, or safe, or comfortable one to go to sea in, the like of which, probably, never was seen on the water. I give the pattern—you can improve upon it—the bark is whole at the bottom, cut in curved lines at the side, and making a receptacle for plants which hangs like a spread-open pouch. It is to be sewed up with bright-colored linen thread,



THE CANOE-BASKET.

over edge, and then back, making an ornamental cross-stitch, and suspended by a cord. The thread will decay in time, and it will have to be done over; otherwise there is no wear out to it, and its capa-

city for holding plants is wonderful. As many as you can crowd in will thrive luxuriantly.

Another convenient thing (and it is something *new*, too), is a pen-holder stand. Take a piece of birch bark and roll it in the shape of a scroll or cylinder, after having lined it with gay-colored velvet or satin or silk. Then sew it up over-edge, as above, with coarse silk of the same color, also sew in a neatly fitted bottom, in the same way, and bind with ribbon, or cross-stitch it at the top. It should be when completed about five or six inches high, and as large around as a napkin ring. Then fill to the depth of three or four inches with small shot, and it is ready. The shot are for three purposes — to give it weight enough to stay down, to keep the holders upright, and to cleanse the pens from the ink and prevent them from corroding. Many writers use shot for this reason, in a fancy vase or some esthetic way, but your slender birchen shaft is a pretty substitute.

You know, of course, about napkin rings, and in what variety you can make and ornament them. Such tasteful souvenirs as they are of your summer vacation; and neat articles for presents when you only care to give some simple, inexpensive thing. By taking a little pains you can have very satisfactory results. The ring can be sewed together or glued, as you prefer; the edges bound with narrow ribbon, or buttonholed, or finished with a band of colored paper. You can make a little sketch on one in India ink or oils, or paste on some tiny picture, or work a flower, or initials with worsted. Or, you can cut gashes in regular rows around, and then weave in and out, basket fashion, a narrow ribbon, tying a little bow in the middle.

You can make cornucopias and match-safes. Not long ago I saw in a summer cottage one of these match-safes in each room, with the initials of the occupant worked in colors or some dainty design as the individual's taste suggested. Then there are unique little baskets of fanciful shapes, to be suspended under the gas fixtures for receiving the burnt matches; and hair-pin receptacles, beautifully lined with silk or satin or velvet, to be placed on your bureau among the toilet articles. There are, too, postage stamp boxes, made of small pieces neatly fitted together and decorated; photograph

frames, too. Everything that can be made with perforated cardboard can be made of birch bark.

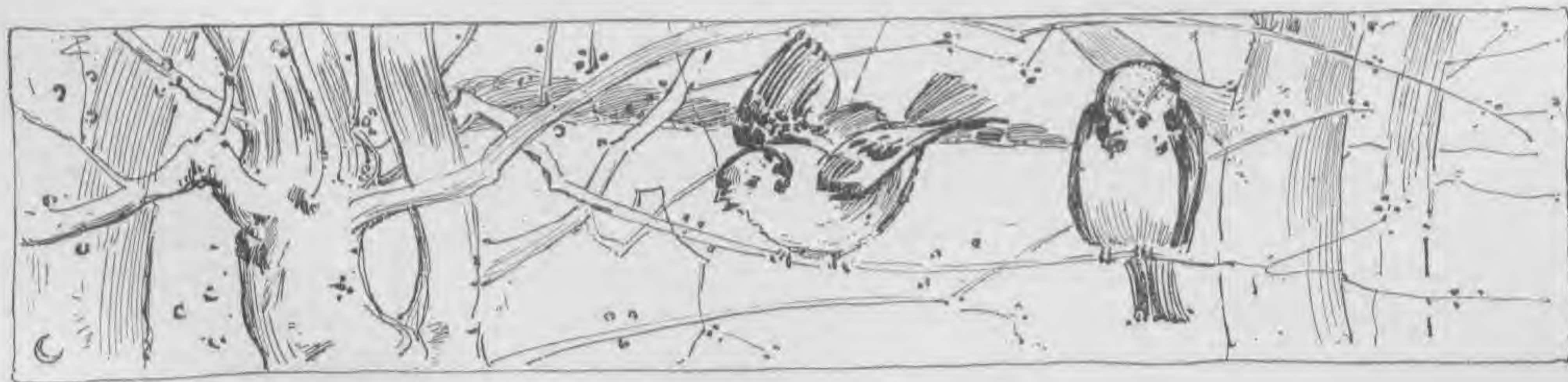
Besides all these, there are the birch bark pictures, which need only the thin, filmy little bits. I have seen lovely landscapes on white cardboard, or photographer's board, made of a few scraps of bark, a spray or two of common moss which may be picked up most anywhere, with the setting off of a touch here and there of a pencil line or shade. Perhaps there was a rustic gate in the foreground, so neatly and deftly done with those fine ribbons of bark; another piece or two clipped into shape suggested a "Boy Blue" out in the meadow; and the moss off in the distance deceived you into the belief that woods grew there. You must put these materials on the cardboard (touching them lightly with mucilage), with reference to that distant affect. A little skill and taste are needed, and the result is something pretty for the mantelpiece among choice things. The cost is almost nothing: photographer's board can be had at a few cents for a good-sized sheet.

There are those other pictures on the black panels, which are also very cheap. Take some Kate Greenaway picture, if you like, and cut your birch-bark figure out like it, or better still, have something of your own designing, and paste on; with a pencil making any added lines you need, such as the features to your faces.

You know that making birch bark ornaments is the "craze" just now, to such an extent that a writer has begged through the columns of a daily newspaper that the birch-trees may be let alone.

But there is no need of spoiling the trees. Anybody who knows much about the country can tell you that rolls and rolls of birch bark may be found on the ground in the woods; and much curled off and almost detached from the trunks; and there are decaying and fallen trees where it is useless. Besides all this, in the great lumber yards at the railroad stations, and wherever wood has been chopped, more or less white birch is to be found. Except for the baskets, only tiny pieces are needed.

Nobody reverences trees or deplors the waste of them more than I do; but birch bark can be obtained without wrong done to this graceful, lovely tree which Coleridge calls "the lady of the woods."





TALES OF THE PATHFINDERS.

BY ARTHUR GILMAN.

XII.

ACADIE AND EVANGELINE.

WE began our tales of the Pathfinders, as I trust you remember, with a romance. We shall end them now with a tragedy. We are all familiar with the touching poem of our great poet, Longfellow, entitled *Evangeline*. I suppose that we have read it many times, and have dropped tears as the trials of the heroine and her lover were brought so strikingly before our eyes. We have walked with them through the forest primeval, and with them have tried to pierce the mazes of the oozy bayous of Louisiana. We have probably execrated the British officer who forced the unoffending people of Nova Scotia from their homes and carried them over seas to a hopeless exile. The poetry of the story is sufficiently familiar to our minds. Now we are to study the matter-of-fact history, which we shall find a little different, though not less sad.

Our studies have already told us that for a long time there was a struggle between the French and the English for the continent of America, and that the French had in solemn form taken possession of the greater portion of the territory, leaving their opponents but a strip along the sea coast. In the year 1710, the English had made themselves masters of the region known as Nova Scotia, or Acadie, which had been settled by the French years before the first settlement was made in New England. France never obtained possession of this region again, and thus in 1755, the year of which I have to write now, the people had been for more than forty years under British rule. They had been mildly governed, and had been asked many times to take the usual oath of allegiance to Great Britain. This they constantly refused to do. They naturally wished to appear to remain neutral in the

struggle that was going on between the two great nations across the ocean. Their children grew up under the rule of England, but speaking the French language and following French customs. They professed the religion that the French professed, too. This was not all. They sympathized with their own countrymen, of course, and did not always carefully practice the neutrality that they professed, for they traded with the enemies of the government that protected them, and they even went so far at one time as to take up arms against the Crown.

Often the question arose in New England, "What shall be done to make the Acadians take the oath of allegiance and act as the British subjects that they are by treaty?" The priests said to them, "Better surrender your meadows to the sea, and your houses to the flames, than at the peril of your souls take the oath of allegiance to the British government." This was the advice that kept them in antagonism to the British, as well it might, but it is said that the officers were sometimes so arrogant that they incensed the people and made them still more opposed to taking the oath. Of course the Americans and English looked upon all the Acadians as "rebels," and we know that little mercy is accorded by military forces to such. There was good ground for this feeling, too, for by the terms of surrender, in 1710, the people ought to have taken "the oath of allegiance and fidelity to her sacred Majesty of Great Britain." Soon after the treaty of Utrecht (which was signed in 1714, four years after the acquisition of Acadie by the English), there was some correspondence regarding removing the people from Nova Scotia because they still refused to take the oath, but the step was not taken, and time and again was the effort made to bring them to see that they were in the wrong.

England seems sometimes to have paid little attention to her colony at Nova Scotia and the French

were made bold by the want of action. Six years after the treaty of Utrecht, the Governor wrote home: "The inhabitants seem determined not to swear allegiance, at the same time I observe them going on with their tillage and buildings as if they had no thoughts of leaving their habitations; it is likely they flatter themselves that the King's affairs here will allways continue in the same feeble state. I am certain nothing but demonstration will convince them to the contrary." (It will be noticed that Governors in those days did not always spell their words as we do now.) The Governor went on to say that he was sorry to have to recommend a course that seemed to be expensive, but that he thought it would be more to the honor of the Crown to give the country back to the French than to be contented with the name only of government. A few months later, he wrote that the French inhabitants had been suffered so long to indulge in disobedience that it had become a habit and that they had "not only multiplied and become numerous, but withall insolent."

Seven years later still, another Governor wrote that the missionary priests "instil an inculcated hatred into both Indians and French inhabitants against the English."

When George the Second came to the throne, it was necessary that the oath of allegiance should be taken to him, but this the French still refused to do. In 1730, the Board of Trade wrote to the Governor that those who refused the oath ought to esteem it a mark of the King's clemency that they had not long before been obliged to quit their settlements in accordance with the terms of the treaty of Utrecht.

Thus matters went on. Governors came and went, but the settlers remained ever stubborn. In 1749, Governor Cornwallis remonstrated with them, saying that, being undoubtedly subjects of Great Britain, they ought to have taken the oath of allegiance the moment they had become such; that they had for more than thirty-four years refused to do it, though all the while they had been in the full enjoyment of their possessions and their religion; that he would be delighted to be able to tell the King that they were acting as good subjects; and that he would make such a course much to their advantage. Still the Acadians refused the oath. The Old French and Indian War, as it was called, was approaching, when matters were to reach the climax. The war that was to end in 1763, at which date the Seven Years' War closed in Europe, in the resignation by the French of all claims to territory, began on our continent in 1754. It was a notable struggle, and it fitly closes our series of views of the Pathfinders and their labors.

There are always two sides to a question, and there are two to this one. You may read in Mr. Bancroft's great history (in chapter seven), that during the forty years that followed the peace of

Utrecht, the Acadians had been forgotten or neglected by England and had prospered in peace and seclusion; that they had no magistrates or tax-gatherers, and settled all their little disputes by reference to their religious teachers. They formed one great and happy family, living on the produce of their fields and herds in the most Arcadian simplicity. This charming picture was derived by the historian from a book written by a Frenchman who was opposed to the English and wished to make it out that they were unjust oppressors of a peaceful people. It was the Abbé Raynal who first said that the Acadians had no magistrates nor tax-gatherers, and lived happily in peace and plenty. He said, too, that their houses "were extremely convenient, and furnished as neatly as a substantial farmer's house in Europe." Mr. Longfellow, like Mr. Bancroft, followed this French description, and wrote in his poem:

Strongly built were their houses with frames of oak and of
chestnut,
Such as the peasants of Normandy built in the days of the
Henries:
Thatched were the roofs, with dormer windows; and gables
projecting
Over the basement below protected and shaded the door-
way.

The Abbé was too desirous of making out a good story, I fear, and forgot that two of his own countrymen had described the houses as "wretched wooden boxes, without convenience and without ornament, and scarcely containing the necessary furniture."

I dislike to spoil the beautiful pictures of the historian and the poet, but it must be said further that the Acadian farmers were not "the simple people dwelling in love" that they have been represented to be; but on the contrary "a very litigious sort of people," as the archives of Nova Scotia say that they were. Just before the time I am writing of they were said to be "tolerably quiet as to government matters, but exceedingly litigious among themselves."

Such was the condition of affairs in Nova Scotia in the year 1755, when the American colonists and the British government thought that they could no longer permit the French and Indians to threaten and molest them with impunity. They had planned four expeditions to attack them. General Braddock was to go towards the Ohio and the Northwest; another officer was to attack Crown Point; a third was to try to reduce Fort Niagara; and the last expedition, under John Winslow, of Marshfield, Mass., was to remove the French from Nova Scotia. It was war into which the colonists plunged; war for peace and the protection of their homes. Braddock was killed, you remember, and young George Washington, his aid, came into prominence at the time. The expeditions against Fort Niagara and

Crown Point did not succeed, and we have only to ask what Winslow did at Nova Scotia.

He was told by his superiors that owing to the continued contumacy of the French, it had been determined to remove the entire population, and that he must accomplish the work promptly and with such secrecy as would prevent their escape to parts from which it would be difficult to recover them. War is a disagreeable thing and must always involve many innocent persons in pain and sorrow. This one was no exception to the rule. There were many among the Acadians who were innocent of ill-feelings towards England, but they were all involved in the sorrow that was now to come upon them. They had followed the bad advice of their priests, and were to suffer for it just as much as if they had hated Great Britain and all things English.

Colonel Winslow had been provided with sloops, schooners and ships in which to take the rebels and their families to North Carolina, Virginia, Maryland, Boston, New York, Philadelphia, and to some ports in Connecticut. He was instructed to manage to get the people together in some way — fair or foul — and when they once were in his power, to put them on the vessels and send them away. Their homes and crops were to be destroyed, and every means taken to prevent them from getting a hold upon the soil again. In accordance with these instructions, he issued a proclamation calling all the men to come together on the fifth of September. When those about Grand Pré had been thus brought together, they were induced to enter the church, where they were kept as prisoners, Winslow speaking to them and telling them that all their possessions were forfeited to the King on account of their stubbornness, and that they were to be removed. He said that the path of duty on which he then was was very disagreeable to his "natural make and temper," but that as a soldier he had nothing to do but obey orders. He added that the King would permit them to carry with them their money and household goods and that he would see that they were not molested in doing it. In conclusion, he said that he hoped that in whatever portion of the King's dominions their lot was cast, they would be faithful subjects — a peaceable and happy people.

As when the air is serene in the sultry solstice of summer,
Suddenly gathers the storm and the deadly sling of the hail-
stones
Beats down the farmer's corn in the field and shatters his
windows,
Hiding the sun and strewing the ground with thatch from the
houseroofs,
So on the hearts of the people descended the words of the
speaker.
Silent a moment they stood in speechless wonder, and then
arose.
Louder and ever louder a wail of sorrow and anger,
And by one impulse moved, they madly rushed to the door-
way.

Vain was the hope of escape; and cries and fierce impreca-
tions
Rang through the house of prayer.

But little time was to be allowed for preparation for leaving the homes where most of the poor people had been born, where they had all hoped to live out their days. As the poet says:

Four times the sun had risen and set; and now on the fifth
day
Cheerily called the cock to the sleeping maids of the farm-
house.
Soon o'er the yellow fields, in silent and mournful proces-
sion,
Came from the neighboring hamlets and farms the Acadian
women,
Driving in ponderous wains their household goods to the sea-
shore,
Pausing and looking back to gaze once more on their dwell-
ings,
Ere they were shut from sight by the winding road and the
woodland.
Close at their sides their children ran and urged on the oxen,
While in their little hands they clasped some fragments of
playthings.

Thus to the Gaspereau's mouth they hurried, and there on
the sea-beach
Piled in confusion lay the household goods of the peasants.
All day long between the shore and the ships did the boats
ply;
All day long the wains came laboring down from the village.
Late in the afternoon, when the sun was near to his set-
ting,
Echoed far over the fields came the roll of drums from the
churchyard.
Thither the women and children thronged. On a sudden
the church doors
Opened, and forth came the guard, and marching in gloomy
procession
Followed the long-imprisoned, but patient, Acadian farmers.

Our story must end here. We shall not follow the poor prisoners on their painful voyages. We do not care to enter upon the terrible details of privation and suffering that fell to their share as they found themselves cast out upon foreign shores — families broken up, maid and lover separated, perhaps forever, perhaps to be brought together as the poet tells us, just as life was ebbing away, only to die together. It is a sad, sad tale. It was a cruel deed that the government did when it decreed that these people should be scattered on strange strands instead of being carried, as they might have been, to sunny France where at least they should have been able to speak the language of those around them. War has many terrible tragedies to answer for, but this one stands by itself in history.

By kingly rule, an exile's lot they bore,
The poet's song reclaims their scattered fold;
Blown in melodious notes to every shore,
The story of their mournful tale is told.
And to their annals linked while time shall last,
Two lovers from a shadowy realm are seen,
A fair, immortal picture of the past,
The forms of Gabriel and Evangeline.

IN CASE OF ACCIDENT.

BY DR. D. A. SARGENT.

XII.

THE LUNGS. (*Continued.*)

SUFFOCATION is often caused by a person's inhaling smoke while attempting to escape from a burning building. Most persons who are thought to have been burned to death have in all probability been suffocated by smoke before the flames reached them. Such accidents are always likely to happen. But building houses of highly inflammable material, introducing elevators, and substituting brick walls for wooden partitions, etc., render death by suffocation so probable that every one should at least familiarize himself with preventive measures.

In going to a strange house it is always well to acquaint one's self with the exact location of all of the stairways and different means of exit in case of fire. If you are on the top floor explore the roof, and examine the gutters and water-pipes to see if they would offer you a ready means of escape. If you are travelling, it would be a good plan to provide yourself with a stout webbing belt with a ring in it, a couple of smoothly polished hand screw eyes (*Fig. 1*), and fifty or sixty feet of strong hempen cord. With these implements in your possession you could readily effect an escape from a window when danger threatened and other means of exit were not available.

The consciousness of safety that one feels when he has full knowledge of the situation, and confidence in his ability to meet danger, goes far to insure presence of mind, and that complete mastery of self which is so important in case of emergency. To acquire this confidence you should satisfy yourself as to the strength of your rope and belt, the rapidity with which you can insert your hand screw into the window frame, the ease with which the cord would slip through the screw eye and ring in your belt, etc. — in fact make a practical test of your ability to descend from an easy height by means of a rope.

Unless portable fire escapes are put to the test by actual practice at a safe distance from the ground, they are as likely to do as much harm as good when tried for the first time in moments of excitement.

If you are suddenly called upon to fight your way through smoke, remember that it will not do to inhale it.

This will cause you to gasp for breath and take in more smoke than you would naturally.

If the only way left to you for escape is through the halls which are filled with smoke you must make the best of it. Take a large sponge saturated with water, or a wet towel — the former may be held in the teeth and the latter can be tied around the nose and mouth so as to leave the hands free — fill the lungs with air and start for the stairway or nearest exit, having assured yourself that you are not running into the fire instead of away from it.

If the smoke is very thick crawl on your hands and knees and keep the mouth close to the floor, as by so doing you may be able to get a good breath of air.

Upon reaching the stairs make the descent as soon as possible, sliding down if the smoke is oppressive, so as to get the benefit of the air near the surface.

If troubled for breath go to the nearest window and open or break it, and get two or three whiffs of fresh air and start again for the ground floor.

In attempting to descend from a burning building by aid of rope the success of the undertaking depends greatly upon your coolness and presence of mind.

If you are strong in your arms most any kind of rope that you can hang on to will answer your purpose, but such ropes, now that beds are made of slats and wire, are not usually found lying round loose when you want them. For this reason it is better to provide yourself with a strong cord made for the purpose as we have just recommended. To make this contrivance practicable for the use of women and children, a simple harness can be constructed of webbing (*Fig. 2*) that will allow a person to sit in it with as much comfort as in a swing.

Having decided to make the descent first see that your rope is long enough to reach to the ground, or a balcony or roof below, then put in your hand screw (*Fig. 3*), at the top of the window-frame if you can reach, if not as high up on the side of it as possible. Now put on your harness, pass four or five turns of rope around your ring and tie the end to the hand-screw. See that your rope is free so that it will run through the ring without getting tangled, then grasp the rope below the ring and bear your weight on the harness (*Fig. 3*). The friction of the rope around the smooth polished surface of the ring will make it easy to hold the weight and lower it at will. If the descent is made to a roof or balcony, from which you will have to use your rope to go further, you might better put the end through the eye in the hand screw and fasten it to

the ring in your harness or belt. This will enable you to take the rope with you, and use it for a still further descent if necessary to reach a place of safety.

There are a variety of portable fire escapes that may be substituted for this, but all of them should be put to the test before using at any height in case of emergency. When an attempt is made to rescue a person supposed to be in a burning building, the same precaution should be taken as in rescuing a person from a room filled with poisonous gas. Break in the windows from the outside if possible and let out the smoke, then enter the room as best you can, and bring out the suffocated person.

If necessary to pass near the flames a wet blanket thrown over the head will afford the person protection.

In order to restore a suffocated person to life you should resort to the same methods as employed to resuscitate the apparently drowned, or those asphyxiated by coal gas, etc.

Artificial respiration is of the first importance. Dashing cold water on to the chest will sometimes start up the breathing process and quicken the circulation.

Warm, stimulating drinks should be given where there is great feebleness and exhaustion.

SUFFOCATION FROM CHOKING.

This accident, though not very common, sometimes occurs and a little assistance is of great service. Those who have a chronic inflammation in the throat, or a slight stricture of the œsophagus, are more liable to accidents from choking than others. The immediate cause of distress is the sticking in the throat of some article of food that presses against the windpipe. If the obstacle in the throat is large enough to obstruct the passage of air through the windpipe, death follows unless relief is speedily at hand. In a severe case of choking the person grows purple in the face, the eyes protrude, the voice becomes unnatural, and the hands grasp the throat spasmodically endeavoring to force the obstacle onward.

Now is the time for assistance. Open the mouth and run the forefinger down the throat and endeavor to dislodge the obstruction. If you find it impossible to do this bend the person over the back of a chair, and strike him forcibly between the shoulder blades two or three times with the open hand.

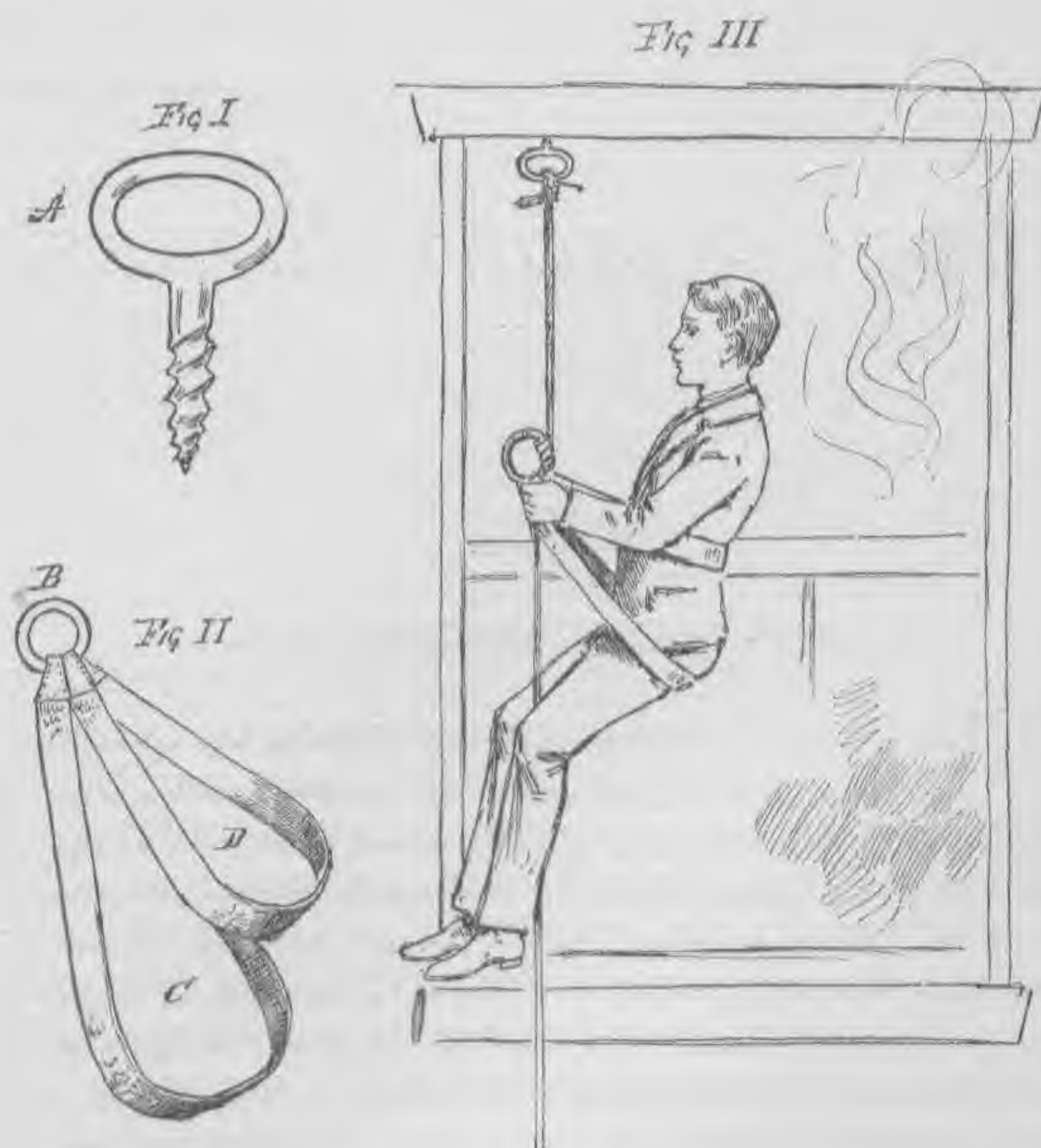
This will tend to force the air out of the lungs and may start the obstacle from the throat. If this fails and the person can still breathe, perhaps he can be made to vomit. Tickling the palate, or giving him a little mustard and water may produce the desired result.

While the obstruction resists all attempts to get it out, perhaps it can easily be pushed down towards the stomach.

Any piece of elastic material such as rattan, whalebone, etc., can be used to force the obstacle onward. To render this service more effective, the rattan or whalebone should be notched on the end and a piece of sponge about as large as the end of the forefinger should be tied on to the stick. After the sponge is well oiled it may be pushed down the throat carrying the obstruction before it. In severe cases of choking send for a physician if one is in the neighborhood, as a surgical operation may be necessary to save life.

METHODS OF CARRYING THE INJURED.

Should an accident occur in the woods or at the sea shore or any remote place, it is often important to convey the injured person to a place of shelter or comfort before a carriage could be obtained.



Where a person has received a bad sprain of the ankle or knee, he may be borne on your back with your arms under his legs.

If too heavy for you to carry he may be assisted to walk on the uninjured leg by allowing him to place one arm around your neck, while you help to support his weight with your arm around his waist.

If the feet or legs have been cut or crushed — it would be better to hold them in a slightly elevated position.

In cases of this kind the person can be carried as a child if he is a light weight, or if you have others to help you, one may take the legs under the arms with back to the body, while you support the weight from behind with your hands clasped over the chest of the patient. If there are four in the party the person can be borne much easier if two join hands

under the body and support the back while walking by the side.

Sometimes one may be borne very comfortably by two persons grasping their own and each other's wrists, thus making a kind of chair, the person being carried supporting the upper part of his body by throwing his arms over the shoulders of those conveying him. If you have to carry a person a long distance, you might better try to make a stretcher.

This can be made of two poles seven or eight feet long, or even six feet will do if you have enough assistance to help carry from the side.

Oars, fishing rods, guns, small trees, etc., may be used for this purpose.

Over the two poles throw two or three coats and button them underneath. Over these other garments may be laid that will help support the patient.

If shawls or blankets are to be had they will serve the purpose better. Sometimes branches of trees may be bound together and used as a conveyance, the person lying on the limbs while the boughs are dragged over the ground.

In all cases of severe injury you should consider the probability of getting skilled assistance before attempting to do anything that would imperil life.

Try hard to learn what to do in case of emergency; and in order that your knowledge may not desert you in time of need, practice at leisure what you would wish to do in moments of excitement.

If the time of trial comes, and you are found wanting and know not what to do—the safest rule is to do nothing. Remembering that in many cases where something needs to be done, and you are anxious to serve,

They also serve who only stand and wait.

LITTLE BIOGRAPHIES.—HOW SUCCESS IS WON.

BY SARAH K. BOLTON.

XII.

REV. JOHN H. VINCENT, D. D.

THE success of successes is won by that man who, sinking self in his noble plans, builds highways for the people toward a general enlightenment and prosperity. We have seen that many men of wealth recognize this at last, and leave their riches to be used for the diffusion of knowledge. But occasionally there is born a man with that warm brotherly nature which prompts to immediate and constant personal toil in behalf of others; in conjunction with a great organizing brain, the result of this broad and brooding sympathy is like the creative blessing of sun and shower. Such a man there is of our own day and nation. He is not dead, but he has founded his university. He is but in middle life, yet his name is a household word, spoken with respect and love. His success is bound up with that of multitudes. Each day he directs the studies, the aspirations, the hopes of masses of the American people—he has opened for them beautiful gates and avenues else probably locked for their generation.

Surely this is the success of successes. Let us look at the work of this man.

In Central New York, fourteen hundred feet above the sea, is a beautiful sheet of water, twenty

miles long, bordered by rich green foliage which covers the surrounding hills. Pretty villages dot the shore, and a score of steamers give life to the charming landscape. The Indians called the lake Juduqua, which in time became Chautauqua. On the west bank, in the midst of one hundred and fifty acres laid out in parks, walks and drives, is the "People's University," with its great auditorium for six thousand persons, its Museums, Schools of Language, and Hall of Philosophy. Every year nearly one hundred thousand people gather there, some to study literature, some art, and some the sciences, to listen to lectures and to music, enjoying nature the while, and gaining health and rest with knowledge.

Who was it laid this successful plan for the culture, not of one town, nor of one city, but of a continent? Two friends, still in early middle life, Lewis Miller and John H. Vincent; of the latter I write at this time.

In Tuscaloosa, Ala., the land of orange blossoms and magnolia groves, John Heyl Vincent was born, February 23, 1832, descended from the noble Huguenots of France. His father was a man of character, a great reader, an admirable talker, highly conscientious, and devoting his best energies to the careful education of his children. The mother was a woman of singular beauty of nature, patient, amiable, living as though she belonged to Heaven rather than earth. Her father,

Captain Bernard Raser, of Philadelphia, who died at Batavia, Java, on one of his voyages, was a man of elegant and refined manners, which his daughter inherited. This grace of behavior, coupled with the grace of a sunny, self-sacrificing life, made Mary Vincent the idol of the community. Often at the twilight hour, especially on Sundays, after the family circle had joined in prayer and in singing, she would take her children to her own room, and there sweetly and tenderly tell them about the life to come, and point out plainly their faults and spiritual needs. The noble yet somewhat stern type of character in the father commanded honor and respect; the gentle winsomeness of the mother won enthusiastic love.

The eldest child who survived infancy, John, with a fine physique and impulsive nature, would naturally have inclined to the boisterous sports natural to boyhood, and to athletic feats, but this early training made him serious and reflective. Before he was six years old he would gather the colored children of his father's place and of the neighborhood, and then, while with a whip he ensured their sitting still, he preached the gospel to them. How much good such preaching did them, it would be difficult to say. His eagerness for the performance of public service in due form went so far that on one occasion he tore in pieces a valued red morocco hymn-book—the gift to him of his pastor, giving each of his congregation a few leaves. He forgot the reception he would surely have from his father, when he had finished these services, and brought away the dismembered hymn-book, for Mr. Vincent, senior, did not "spare the rod and spoil the child."

The lad seems early to have had conceptions of the value of a college education, for when three years old, with a little next-door neighbor, now the wife of Bishop Hargrave of the M. E. Church South, he walked a mile to the University of Alabama, where the aspiring couple were picked up by one of the professors, an intimate friend of the families, and taken care of until a servant arrived in quest of the runaways.

The family moved North in 1838 and settled near Milton, Penn., where the father purchased a large farm, and built a mill on the Chillisquaque Creek, which empties into the Susquehanna a few miles above Northumberland. Here, when our young public speaker was between thirteen and fourteen, we find him at a play missionary meeting one afternoon; the schoolhouse was full of children, and some one suggested it become a temperance meeting. John was asked to make a speech, which he did for three quarters of an hour, and it is said there was great fun and enthusiasm, and quite likely some of the fun was at the young orator's expense.

Under a governess he fitted for, and entered, Milton Academy. An eager reader, before he was

fifteen he had read many of the standard works in his father's library: Addison's *Essays*, Rollin's *History*, Gibbon's *Rome*, Pitkin's *Civil and Political History of the United States*, *Pilgrim's Progress*, Shakespeare, Burns, Young, Pollock, and such biographies as the lives of John and Charles Wesley and John and Mary Fletcher. The simplicity and beauty of Addison's style delighted him, while the story of the Wesleys was an inspiration to a youth who believed he should do something in his life too for the good of the world. This faith, this resolve, was doubtless both shaped and strengthened by the society of the ministers and other educated people who shared the hospitality of the Vincent home. Here no denomination was unwelcome, and young John Vincent, though a Methodist in belief, grew to manhood with a Christian love broader than any sect and wider than any section.

At fifteen he was asked to teach a country school near his father's house. Desiring work, and believing that he should enjoy teaching, he accepted, and performed his newly chosen duties with great enjoyment. The next year he took charge of another school, and later still taught on the Juniata, some distance away. This was his first genuine absence from home. He dreaded the going. The time came at last for him to start at midnight. The dear mother tried to make the home even brighter and cheerier than usual. The house was gayly lighted, the younger children sat up till the tired eyes could keep open no longer, there was smiling cheer on every hand. "Do not cry when I am leaving," John had said to his mother; but when the hour came, with pale face, and with tears on her cheeks that could not be kept back, she put her arms about him, but she could only say, "My son, live near to God; live near to God." The boy of sixteen went out into the world with these words ever before him in letters as of fire.

So early as this the genial bents of the educator asserted their strength. One of the schoolhouses in which he taught was on the edge of a grove, and there he constructed rustic seats for his pupils, where on every pleasant day the school studied out of doors—a miniature Chautauqua.

During four years of teaching he had continued his own studies, and finally registered at Alleghany College, Meadville, Pa. It of course had required unusual will and perseverance to teach all day, to hear private pupils in the evening, and at the same time to study so systematically as to be ready for college. He must have been tired often, often like other boys longed for recreation and freedom, but he never lost sight of his aim or let go his hold of his self-appointed task.

But now came an unexpected turn of plan. Having joined the church when a Sunday-school scholar, he hoped some time to become a preacher. "Why not enter the ministry at once?" argued

some clergymen who were friends of the family. "The world needs to be saved, and there is no time to be lost." Young Vincent knew, yet not so well as a man knows it in later life, how necessary is a college training for one who has resolved to become a leader of thought; yet on the other hand, with unfortunate haste, he was anxious to be at his work as soon as possible. After some debate he took the advice of these unwise counselors, abandoning his plans for immediate collegiate education, and at twenty years of age, on horseback, with a pair of saddlebags, started out to preach, on a thirty-mile circuit, over the mountains and through the valleys of Luzerne County, Pa. Sometimes he developed his sermons as he rode, often for



REV. JOHN H. VINCENT, D. D.

miles without a single house in sight, speaking to the echoing forests; sometimes he read Dante, and Comte's Philosophy, and committed to memory portions of Campbell's *Pleasures of Hope*. Wherever he stopped the people gave him welcome, for he was interested in their home life and in all their plans. Children were glad when his bright face was seen in their midst. He never shook hands with the tips of his fingers, nor preached dry sermons.

He usually spoke three times each Sunday, and so eloquent was he that he was sometimes called

the "Young Summerfield," after the brilliant preacher who died in New York in 1825, only twenty-seven years of age.

The fame of the boy-preacher grew apace in the limited circle of his earliest ministry, but he was not spoiled by the praise, for his discreet father had told him that as he had great facility of speech, he must be careful not to confound ideas with words, nor think because he could talk easily that he was edifying people. "Many young ministers are spoiled by praise," he had said to his son, "and you must compare your efforts with the best standards, and try to feel how great is the contrast between these and your own thought and expression."

About this time the precious mother whose pride and delight in her son gave zest to his life, died, to the great grief of all who knew her. Says a well-known minister: "She was one of the loveliest Christian women I ever knew. Nothing seemed ever to disturb the equanimity of her spirit, or displace the smile from her countenance. Her death was a personal bereavement to hundreds beyond her own family and kindred." Her children have often said, "We never once knew her to speak a quick or impatient word."

Life seemed now more serious than ever to young Vincent. He spent a year at the Wesleyan Institute of Newark, having joined the New Jersey Conference in 1858. Says Rev. George H. Whitney, D. D., President of the Centenary Collegiate Institute at Hackettstown, N. J., who was at this time Secretary of the Newark Institute:

Tall, slender, graceful, genial, with a kind and intellectual face, with abundant brown hair, but beardless, I was struck with his manly appearance. We became fast friends. At that early age he showed a mastery in controlling places, people, and the dozen minor pulpits under his control; always mild in manner, strong in purpose, and equal to the occasion. After school he usually walked with me for one or two hours. It was his custom to commit to memory many stanzas and couplets of poetry of wide range, repeat them as we talked, and challenge me to equal him if I could. Daily, in our walks, he would say, "Give me a text, and let me analyze it." Quick as a flash he would produce *first, second, third, finally*, and ask me to criticise it. I have never met his equal in analytic power. He was full of sparkle and cheer as now. All said "I see in this young man elements of future greatness." Yet he was always modest and unassuming; true, pure and noble. He was a fine speaker in those days, and popular everywhere.

He became pastor, for two years, at North Belville, N. J., and for the following two years at Irvington. It was now, not satisfied with pulpit work alone, then he developed an educational plan. Every Saturday afternoon pastor and people came together, imagining themselves a band of tourists in Palestine. Bible History and Geography were studied. Every scholar was personally examined, and as he or she had made progress, was promoted by grades to "Pilgrim," "Explorer," "Dweller in

Jerusalem," and "Templar." During a later pastorate, where a similar class had been organized, the pastor wrote weekly letters for the village paper, and so graphic and interesting were they that many believed there was an actual excursion. Meantime he had pursued the four years' course of theological study required by his church.

His father having moved to Chicago to take charge of large business interests, young Vincent was naturally drawn to the West where he preached several years in Northern Illinois. In Joliet, Mt. Morris, Galena and Rockford, the Saturday afternoon Palestine classes were crowded by old and young, and from all denominations.

Although so busy and engrossed, he was not too busy to fall in love; but he wisely waited till he was old enough to be certain what kind of wife he wanted. When he was nearly twenty-seven, he married Elizabeth Dusenbury, from Western New York, whose father was a Presbyterian elder, honored and beloved by everybody. The daughter had a fine mind, unusual strength of character, and good judgment, with a delicate sense of propriety and steadiness of purpose. Well may Doctor Vincent say, "I owe more to my wife than to any other human being save my mother." Into his plans she entered heartily, and became a counselor and helper. Four years after his marriage he spent a year in Europe, traveling over Egypt and Palestine, thoughtfully surveying those countries which he had taught thousands to love. He returned home refreshed, to enter upon still wider activities. He had always been deeply interested in Sabbath-school work. How could he reach the children of America so that they would love Bible study, and how help the teachers to make this study interesting? He decided to start a paper devoted to that end. This was the *Northwestern Sunday-school Quarterly*. He had before that organized the first Sunday-school Institute in the country, and a little later, in 1866, he originated and edited the *Chicago Teacher*, from which has come the International Lesson System now used among Protestants throughout the world.

He was now only thirty-four, yet the foremost leader in Sunday-school work. He was made agent of the Sunday-school Union of Chicago, and a little later the Secretary of the Sunday-school Union of the Methodist Episcopal Church, to which position, for the fifth term, of four years each, he was re-elected in Philadelphia last May. The mother's prayers and beautiful life were surely having their influence in the Christian energy and patient, far-reaching power of her eloquent son.

When appointed to the Secretaryship, he removed to Plainfield, N. J., where his home became a centre of social and intellectual activity. Says a leading clergyman:

Doctor Vincent preached in the Presbyterian, Congrega-

tionalist, Baptist, and other churches in Plainfield, many times. His name crowds any church on any occasion, in a hard rain or a hot night, and this has lasted for sixteen years! Doctor Vincent has few peers in the American pulpit. He is a princely preacher.

All these years he had recognized, for himself as well as for others, the necessity of collegiate education. Though his hands were full of work, he had continued his studies alone, carefully taking up higher mathematics, science, metaphysics and classics, till he had mastered the college course, receiving his A. B. degree after a regular examination.

The absorbing question with him then became, "How can the great world catch the 'college outlook'?" He reflected that few of the vast number can afford the means. Tens of thousands are too busy earning their daily bread.

What seemed a grave mistake in his early life—the neglect to secure a college training—in his treatment of it became a blessing to the world. "Some way must be opened for old and young to become educated," resolved the earnest minister; but still it was not opened for some years.

In 1874, Mr. Lewis Miller, of Akron, Ohio, a wealthy and generous man who loves Sunday-schools, suggested the idea of a large gathering at Chautauqua, where Christian people could enjoy lectures, science, literature and theology. The plan was perfected; Mr. Miller was made President, and Doctor Vincent Superintendent of Instruction. The place soon attracted large numbers of visitors, and has been the parent of all other Sunday-school assemblies.

Four years later, while Doctor Vincent was crossing the ocean homeward, after a resting-time at the foot of the Alps, the old idea of a College Reading Course for the people was matured. Doctor Vincent calculated that by reading at least one hour a day, for four years, as long a time as many tired fathers and mothers could spare, a fair knowledge of literature, history and science could be obtained. But would the people of this country take hold upon the idea? Time would tell. He laid the plan before President Warren of Boston University, Doctor Howard Crosby, Doctor J. G. Holland, William Cullen Bryant and others, and all gave it their hearty endorsement.

On August 10, 1878, the Chautauqua Literary and Scientific Circle (C. L. S. C.) was inaugurated at Chautauqua in the huge tent where the Amphitheatre now stands, and more than seven hundred joined at once. A college president was the first to give his name. The class of the first year numbered eight thousand people, and the demand for the needed books exhausted the entire stock of the publishers on the first day! ah, yes, the people were anxious to learn.

A circle with three hundred members was formed at Cleveland, Ohio, one with five hundred at Pitts-

burg. Letters came from all over the country. One wrote :

I am so grateful to you that I can't express what I feel. I am a hard-working man. I have six children, and I work hard to keep them in school. Since I found out about your Circle I am trying my best to keep up, so that my boys will see what father does, just for an example to them.

Another :

I am a night-watchman, and I read as I come on my night rounds to the lights.

A Mississippi captain wrote that the course was of value to him, "because," he says, "when I stand on deck stormy nights, I have something to think about."

President Garfield, not forgetting how he had hungered for an education, studying his open book as he drove the mules along the tedious path by the Erie Canal, spoke earnestly before the assembled thousands at Chautauqua, urging the value of this plan of study :

You are struggling with one of the two great problems of civilization. The first one is a very old struggle ; it is, "How shall we get leisure?" That is the problem of every hammer-stroke, of every blow that labor has struck since the foundation of the world. The fight for bread is the first great primal fight, and it is so absorbing a struggle that until one conquers it somewhat, he can have no leisure whatever. So that we may divide the whole struggle of the human race into two chapters—first, the fight to get leisure; and then comes the second fight of civilization, what shall we do with our leisure when we get it? And I take it that Chautauqua has assailed this second problem. Now leisure is a dreadfully bad thing unless it is well used. A man with a fortune ready made, and with leisure on his hands, is likely to get sick of the world, sick of himself, tired of life, and become a useless, wasted man. What shall you do with your leisure? I understand that Chautauqua is trying to answer that question, and to open out fields of thought, to open out energies, a largeness of mind, a culture in the better sense, with the varnish scratched off, as Brother Kirkwood says. We are getting over the business of varnishing our native woods and painting them. We are getting down to the real grain, and finding whatever is best in it, and truest in it; and if Chautauqua is helping to garnish our people with the native stuff that is in them, rather than the paint and varnish and gewgaws of culture, they are doing well.

The delightful work goes on, always making new channels, and always broadening all its old ways. About sixty thousand persons are studying the Chautauqua Course, several hundreds of these in Canada, and some in India, South Africa, Japan and the Sandwich Islands. One half the required readings for the members are published in the *Chautauquan*, a magazine edited by Rev. Theodore L. Flood, a man in whom every good cause has a true and able advocate. Ten or more Chautauquas have been organized in various States.

Out of this work has grown the Chautauqua University, chartered by the State of New York,

conducted by well-known professors through written examinations. The "Young Summerfield," who rode over his mountain circuit in Pennsylvania at twenty, has become its chancellor, known and honored throughout America. Still he has found time for other labors, as those know who have listened to his lectures on *Reading, The Model Husband, Egypt and the Pyramids, That Boy, That Boy's Sister, Sidney Smith, The Witty Dean, The Every Day College*, etc.; he has written a manual of Bible History and Geography, entitled "*Little Foot-prints in Bible-lands*," a volume on the Church School, small books on Sunday-school work, and several text books for the Chautauqua course; and he has spoken at innumerable famous gatherings, like the Sunday-school centenary at Guildhall, London, and preached in such far-off places as Jerusalem and Damascus. One secret, I think, of his remarkable success is that his enthusiasm and sympathy never fail. His humor, his genial face, his magnetic manner, his sunny outlook, his confidence in work to achieve anything and everything for a man, make him the idol of his audiences, while his energy, his own capacity for endless work, and his executive power fit him for this leadership.

Another secret is, that while the details of his varied labor is something unparalleled, his home life is joyous and refreshing.

The Vincent home at New Haven is like the father's, in the early days, most hospitable. Dr. Vincent and his only son—a young man of great promise, at Yale—are like brothers, counseling together. I heard him say once, "My boy is my only 'pet.' I like birds—in the free air of heaven. I like dogs—in my neighbor's yard. I like cats—in pictures and at somebody's else fireside. I like horses—when somebody else drives them."

Another secret is that both in his study, and on the wing, Dr. Vincent is a great reader, marking his books, and re-reading the things he likes. He says: "I get strength, breadth, out of general reading, and put them into my work. The best service of a book to me is not the ideas I get out of it, but the force intellectual, and the breadth of view it gives, which force and breadth I can use in producing my own ideas and plans. He has the excellent and orderly habit of jotting down random thoughts, always having a memorandum-book with him while riding on the cars, or in his office, and at night often makes note of a fugitive thought, caught and caged while flitting through his mind. A good talker himself, he broadly makes it a matter of duty to draw people out on a subject, not for the sake of argument, but that he may modify his own views, or get a better chance to modify theirs. Some of his best sermons have grown out of stirring conversations with people, especially skeptics, or those holding different views from himself.

Another secret is that he is a *careful* worker, depending upon both accuracy and finish; often

re-writing the outline of a sermon a dozen times, always maturing each detail of a plan.

In this grand work going on so noiselessly and so closely all around us that we can hardly get the "distance" from which to survey its noble outlines, its projector may sometimes feel fatigue, but exhaustion never. It yields him, as all work of pure beneficence always does, new ideas, new aims,

new hopes for the advancement of the people. Does it yield him *dollars*? some one asks. No; he receives no salary from Chautauqua. His reward, his "support," comes in the consciousness of the love of thousands, in the consciousness of the "lift" Chautauqua has given to the family life of the people and the better "start" thus secured for the sons and daughters of these happier homes.

ANNA MARIA'S HOUSEKEEPING.

BY THE NEXT NEIGHBOR.

XXIV.

HELPS THAT ARE HELPS.

THE Gaylor girls were congratulating you last night that your mother had decided on account of her poor health to keep a girl this summer. They thought it absurd in you to follow the old habit of doing the work yourself, and vowed "no one should ever see them do a hand's turn for themselves so long as they could pay somebody to do it for them." A fine sentiment, that has the right ring of American republicanism about it, that does equal honor to their heads and hearts. When every move in business is toward cheaper prices and economical styles of living, when fire, flood or panic may in one afternoon cut off the finest incomes, our women and girls, safe, sheltered for the time, think it becoming and lady-like to say such shallow things and live up to them. The only safe rule is to allow no one to do anything for you that you can do for yourself, while turning your time and ability to the best account. Two women in fair health can divide the housekeeping of a plain family with comfort and time for other pursuits. If one is disabled, the occasion is clear for outside help, but to you and me the necessity is one to grieve over, as Sin Saxon, in Leslie Goldthwaite's beautiful story, dreaded to have a servant come and derange her trim housekeeping. If you could get one of the nice country girls with a moral antipathy to dirt and a bent toward scrubbing, bred to quickness and thrift, it would be better than miners' luck. I've had such "help," to give them their grateful old name, a sunny-faced girl in clean calico gown, who cooked a good breakfast, served it and had the dining-room in speckless order, the kitchen tidy and house settled by nine o'clock every day — she would have been disgraced in her own eyes not to have her work done up by nine o'clock in the morning — who

could see when things needed tearing up and putting to rights, and had an instinct and energy which left her no rest till everything was in order. She had no fear of doing what wasn't her work; she could cook bread, steak, vegetables to perfection, make pies and jumbles no pantry need blush to own, and if she wasn't gifted in garnishing with dabs of beet, boiled egg and parsley, her dishes, platters and napkins were always clean, and it didn't take away your appetite to go into her kitchen just as she was taking up dinner, for no chaos of dirty dish-towels, and parings, spatters of grease and cinders surrounded her cooking. She had the gift of faculty and habit of using it. This is what you must look for if you want help worth paying.

For it is not a one-sided bargain you are making. You get the services of a woman trained to nothing better than the use of her hands and muscles in domestic work, at any rate one who can do nothing else for the time. For this you pay from eight to twelve or fifteen dollars a month according to her skill or the scarcity of help — but that is the least part of what you give her. She fares as well as you as to food, a decent room and comforts are a matter of course, and you bear the expense of her inexperience, carelessness, and perhaps her ill health. Your housekeeping will cost one third more at least, with even a tolerable servant — so few girls know how to use supplies without waste. All these things count in the wages of an apprentice or workman — they rightly should in the servant girl's account.

For your sake, as well as her own, you are bound to treat her with consideration. No woman with good feelings will put a girl to sleep in a dark airless hole in the basement, or an attic out of repair without common furniture. You must give her a clean, airy room and good bed, and have her keep it so. It is a good rule to have every servant who leaves wash the thinner blankets and quilts, air the bed thoroughly and scrub the room for the

next who comes. If she found it clean for herself she will rarely object to do this for another of her own class. I use the word class as a convenience, but I detest the unchristian, unladylike idea that the women of any sort or nation differ from the highest rank, save in circumstances only. Give your hired girl who does your hard work a good bed to rest on, and a cheap set of springs under it, for one recovers strength better in an easy bed. The furniture may be plain, second hand, but not battered, dusty or greasy. Have a glass large enough to comb her hair and pin her collar by comfortably—no pinched seven-by-nine affair. Let her have a stand, bureau, rocking-chair or at least a low chair, and a closet or ample rack for her dresses. A bare floor with carpet by the bed is kept clean easily, and she will hardly thank you for giving her a carpeted room to sweep. She will appreciate little things like a clean towel on the bureau, a tidy on the rocker, a gay hair-receiver and a white spread on the bed. If you had to sleep often in rooms with fusty, rickety old furniture, with bare, stained bureau and table, and grimy patch quilts, you would appreciate a neat bright room to yourself, and be careful how you had to leave it. If the room is nice you can with better grace in her eyes insist on its being kept neat, and you will have to teach every girl that comes to throw off the bedclothes, turn up the mattress and open the window before she goes down in the morning. She may leave the bed unmade till she gets into it at night—that is her own lookout—but she must empty slops and leave the room airing the first thing. It is easy to take the clean slop-pail up at night and bring it down when she goes to light the fires, and then it is over for the day, and the room does not gather indescribable smells that makes the sleeper in it stupid and heavy in the morning. Have plenty of bedclothes, and an old quilt folded under the sheet, both to be easy to sleep on and to keep the bed clean. See that the girl has a hot soapstone or brick wrapped up to warm her bed in cold nights. It takes the chill off a cold room and cold bed, and often prevents taking cold which unfits one for working comfortably. Take care that she has umbrella and rubbers to go out with in stormy weather, teach her not to rush out of a heated kitchen to the yard with bare head and arms chilly days, and give her good chance for baths with a warm room and hot water, for nothing makes one feel more active and like work than a hot bath. Make one rule: that your help must go to bed at ten o'clock, unless on special occasions, and have nothing done evenings in stirring-about work except to mix some little thing for breakfast. Teach her that she can peel apples and vegetables or fold clothes just as well sitting down, for she cannot be on her feet all day and keep sprightly for work. The hours of kitchen help begin earlier and end later

than those of any other employment, and should be made equal by giving time for rest and pleasure in the afternoon, *provided* the housework is properly done, as it should be, before two o'clock.

That brings the question, how much one woman should be expected to do. In a plain family a well-trained servant ought to get all the meals and clear them away, do all the washing, ironing, cleaning and sweeping, keep entrances neat and wait on the door bell most of the time. I know perfectly well that half the girls from intelligence offices say they can't do this, and in a house with modern conveniences will make a day's work of getting three simple meals and clearing away, keeping the family on famine diet washing day, and ending the ironing at 9.30 Saturday night, after a fashion. The ordinary "first-class cook," puffy and fat, is all day peeling her turnips and carrots for a plain boiled dinner, and resents being asked to sweep an entry or clear a front door. When you get such a woman to work, you have made a great mistake. What the ordinary American family needs is what the intelligence offices call a girl for general housework, and don't get a plump one. A light, wiry girl will get through work in half the time that a fat one will, without half the fatigue.

In your family of six, the boys ought to get up the kindling and coal, take down and sift the ashes, and tend the furnace or sitting-room stove. It will take them fifteen minutes a day in all, and the care won't hurt them. Your trim kitchen maid should be up at five in summer and half-past five or six in winter as you need an early breakfast. She should have the sitting and dining-rooms tidy, which should want little more than sweeping about the stove, and dusting, the door-steps swept, and breakfast ready by seven, with the kitchen nearly ready for ironing or baking. She can hand the cups and plates at breakfast, then hurry up-stairs and empty slops from the bedrooms—work which *must* be done early—then eat her own breakfast which should be in the kitchen with her own separate tablecloth and napkin. A good servant will keep her kitchen nice enough for anybody to eat in, and there should be a small table to eat from, beside the regular kitchen table which is wanted for work. Half an hour is time enough for her to wash the breakfast dishes and have the dining-room tidy. There is no sense in the way heavy-footed girls drag about this work till eleven in the forenoon. I've seen a table for twenty persons cleared and dishes all washed in ten minutes by the clock, seen biscuit made and baked and breakfast got in fifteen minutes, a cup cake stirred up and baked in eight minutes by lively farmer girls whose pride was in their work, and who would have a washing of six white shirts, twelve sheets, six white skirts, with body and table linen for a family of nine persons, all on the line by ten o'clock, and spend the afternoon at the piano, or go visiting.

They used Doctor Holmes' rule, to work briskly while they worked and rest well when it was done. With all my heart I pity these droning servants who keep on their feet all day, spinning the work out till ten o'clock or midnight, do less and feel thrice as tired as they need. Better by far get a willing greenhorn, and teach her how to work, making the agreement that she is to stay long enough to make it worth while to train her, or forfeit part of her wages. If she learns well, raise her wages as she deserves every three months till she makes the full pay of a good servant. Don't be a screw in prices, but don't make the mistake of thinking that a girl who will not do well anyhow will improve by raising her wages.

Try to teach the girl to make work easy for herself wash-days by putting clothes to soak the night before in warm strong suds, and having the wash-boiler full of water on the stove the night before, where it will be hot in the morning; and on ironing days by seeing that stove-irons and table are clean, and clothes sprinkled the evening before; teach her order in piling up dishes, in marshaling her pots and pans, and how to keep tidy in the midst of work. Do a little with her, and she will catch your brisk step and turn of hand; then insist on her sitting down in the middle of the forenoon for an hour about some light work, or with the newspaper if the work is done. The time is not lost to you when she is resting and you may show her that you do not feel it so. But you must for her sake as well as your own exact careful business-like performance of her work while she is about it. She is not to make your house anything but homelike with her slovenly sweeping, and untidy paint, dull fires and poorly cooked meals, with the discomfort of work forever going on. Treat her well, and you have a right to be teated well by her, and to have your work done to suit you.

The daughters of the house, in a large family, ought to take the care of their own rooms, the parlor and guest chamber, iron their own muslins and laces perhaps, make the cake, polish silver, and answer the door bell when necessary, beside washing china, setting table and doing light work as convenience requires. The work can be so divided as to be a burden to nobody. In small families who do not live pretentiously, one good servant will do all the work comfortably, keeping the house neat, serving meals well, and being herself presentable for waiting on table and door.

Don't be afraid to treat a good servant kindly. Seldom praise directly, but treat her as if you were contented, and be friendly, as I am happy to say, most American people are with their dependents. It looks well to see young ladies going to evening lecture, church sociable or concert with the tidy maid, whose cheerful face shows she is happy to be with them. Don't you remember how

kind Mrs. Carlyle — that model housekeeper whom one can't help quoting — was to her little Scotch servant whom she took for a companion one day to the National Art Gallery in London, bringing home by way of compensation that immortal criticism of a Madonna from the enraptured lassie: "O my! how expensive!" Don't be afraid of being kind to your servants, or of treating them like the same sort of humanity as yourself, for you will lose too much by the contrary course. "The pithiest, quaintest turns of language, the most caustic wit, the most touching pathos in the world," says a deep observer, "I have heard not from the educated and refined lady in her drawing-room, but from hard-working women of the lower class, from the lips perhaps of a washer-woman or of a maid servant who could hardly spell out her letters from home, or the chapter from her Bible of a Sunday." Don't keep an ordinary "tolerable" sort of girl if you can help it; there are enough good ones in the world to be found by seeking. Treat yourself to good help if you have any — and choose a girl to whom you can feel like being her best friend. Then see that she treats you well, does your work as you want it done, makes you comfortable, and makes her labor tolerable to herself. You are entitled to this, and it is no kindness to her to allow things to go on slack fashion. Train her, as I have said, to system and despatch which shorten her hours of work, and make work itself more interesting. Teach her your nice ways, telling her the right thing to do from the first. It is easier to direct than to correct. Take the lead for two or three days and show her how the table is to be set and served, how to make the coffee and bake the potatoes, and tell her that she is to knock on entering the family rooms. It is the hardest thing to teach American girls that they cannot, in a well-bred family, bounce into sitting-room or chamber as unceremoniously as they please. They may tap and enter without farther signal, in sitting-room or parlor, but no person, relative or servant, will enter the bedroom of another without knocking and waiting till bidden "Come in."

The good servants are not all dead, and they make fortunate homes where they stay. Don't pass over faults that can be corrected — do not grudge any kindness in your power to make their lives as comfortable as you want yours.

Whether life will be this or the other thing depends on the woman who reigns in the kitchen. For you can't even read a newspaper with satisfaction if you have had no breakfast fit to eat, and you can't color a picture when your head aches with sitting in a chilly room because the kitchen girl has let the furnace fire get down, and you can't ask company if she declines to know how to wait on them, and you can't go to the Wagner Festival with any pleasure if "she" gives warning and goes off the same morning and leaves

you with the work on hand and lunch to get, nor can you study or write in peace if "she" keeps bouncing in about trifling orders just as they happen to come into her head. Don't you know Beethoven's life was ruined by worthless servants, and poor Mrs. Hannah More's fortune was eaten up

by them, and more than one woman meeting the world single-handed loses all the money and the comfort she earns for want of one good and trusty servant? Thank heaven, that can hardly befall you or me, Anna Maria, for we can always be sure of one good servant — the best of all — *one's self*.

WAYS TO DO THINGS.

XXVI.—HOW TO BUILD A SIMPLE BOAT.

BY CHARLES E. TAYLOR.

EVERY boy living near a pond or stream desires to own a boat, and if he cannot procure one he will "knock together" a clumsy and tottish raft on which he is sure to get his feet wet, if not a ducking. At any rate, he will have something that will float and bear him up as he paddles around the pond. In extreme cases, I have known of a *dry-goods box* made water-tight and used.

Now I am going to aid these boys with such directions as will enable them *themselves* to build a cheap, simple and safe boat. I used to construct such, and often have I seen a line of boys going to the water bearing boats exactly like this one on their shoulders.

No skill in carpentry is necessary; any one able to use a saw and drive a nail can follow out these directions with good results. But the cardinal vir-

on *both* sides, although this is not necessary; but in case you plane but one side give the *planed* side to the water. Also get two half-inch boards of bass (or pine), ten inches wide and eleven feet long. These latter are for the sides; and I prefer bass because it bends easily.

On your bottom board, three feet from the end, draw the line B C, and from this the lines A B, A C (*Fig. 1*). This will give you the curve of your bow, which you may immediately cut out, not forgetting to round off the corners at B and C so that the sides will bend nicely at these points.

Next cut off the square corners at the stern on the lines D E, G F. This not only will make your boat move through the water more smoothly, but also will improve it in appearance.

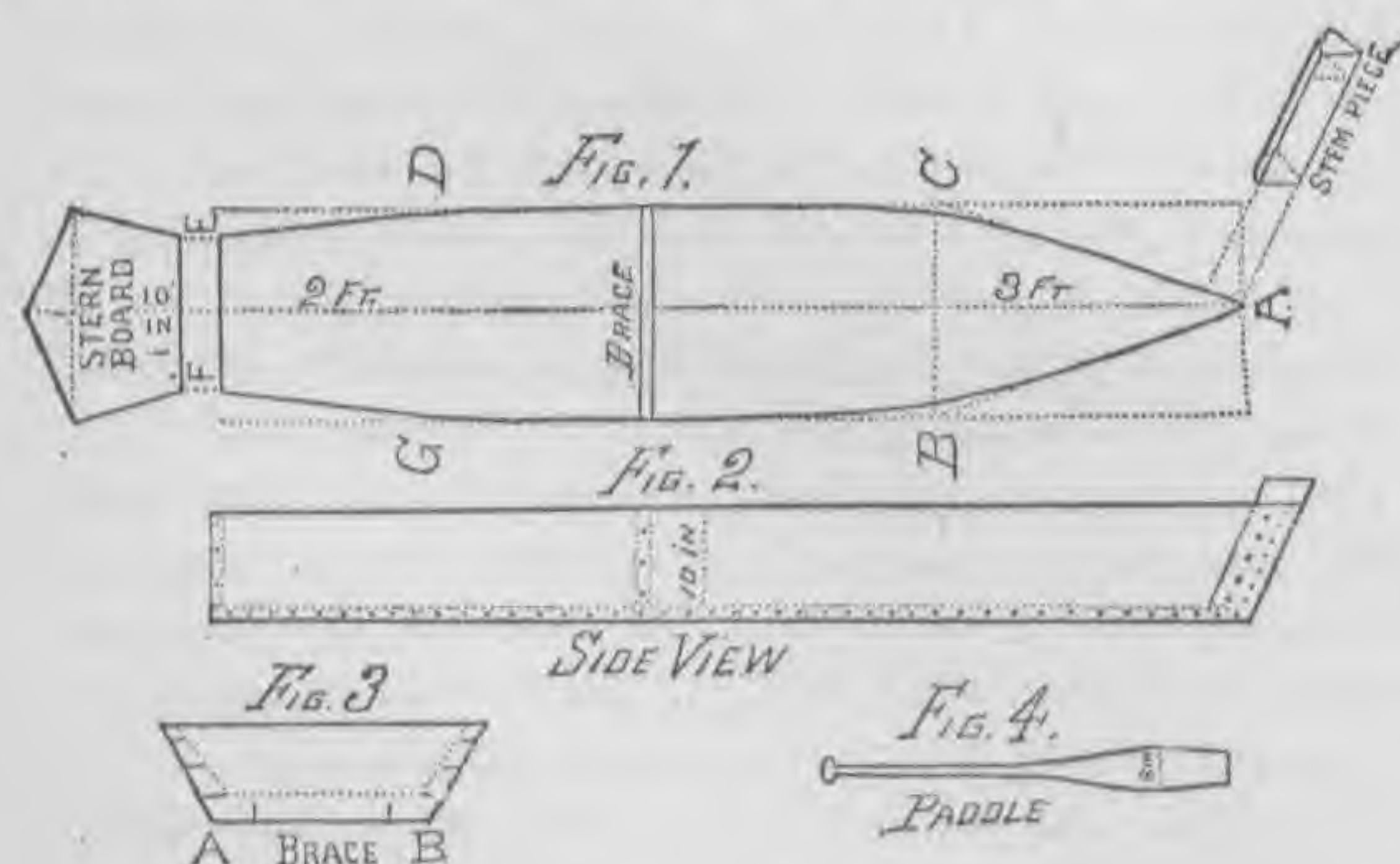
The bottom is now all ready for the stem piece and the stern board. The former should be of hard wood (ash or hickory), cut at the same angle as the bow, to which it must be securely fastened by long screws or nails and inclining as in *Fig. 2*. The stern board is of pine, an inch thick; you will make it after the pattern shown in *fig. 1*. This must be nailed to the *end* of the bottom board.

Before proceeding to put on the sides, a brace is needed at the middle, which is made as follows: From an inch-thick pine board, cut out a piece after the pattern of *fig. 3*, making the line A B the width of the bottom, i.e. eighteen inches (or two feet). Any desired "spread" may be given to the boat by cutting the sides of this brace at a greater or less angle. This should be nailed to the bottom at a point a *little nearer* the stern than the bow.

You are now ready to put on the sides, beginning at the brace and nailing thence to bow and stern. Four-penny nails will do, with now and then an eight-penny for greater strength. Especial care is needed to make a nice job at the bow, and to make as tight a joint as possible.

The sides being firmly nailed on, the brace should then be cut away, down to the dotted line (*Fig. 3*). It will thus serve as a rib at that point, strengthening the sides.

This finishes the wood-work. Now proceed to calk up the seams with old rags, after which give



tue lies in its wonderful cheapness. Two and a half dollars will amply cover the outlay on boards, nails, paint and tar; and it can be completed in two afternoons. I make no claim for beauty; yet its "lines" are far ahead of most other flat-bottomed craft.

Get an inch-thick pine board, ten feet long and eighteen inches (or two feet) wide, as free from knots as possible. It is better to have it planed

it a good coat of paint. I would advise the free use of tar about the bow (both inside and out), as this is a difficult place to make tight.

Your boat is all completed save the paddle. Make this of pine, about four feet long, from the model in *fig. 4*.

The craft may now be safely launched, the navigator sitting either directly on the bottom, or on a low seat three inches high.

Farther, I would suggest that tin be put on the bow and two or three narrow strips on the bottom to preserve it from rubbing; also that the *seams* should receive several heavy coats of paint.

I trust that any boy following these directions will succeed in his endeavors, and enjoy his boat as much as "*we* boys" used to.

XXVII.—THE "BLUE PRINT" ART.

BY EDWARD DEWSON.

BY taking proper care, and by study of these instructions, any boy or girl who enjoys experimenting with chemicals and who is not over-fastidious about soiled fingers may spend an occasional spare hour, not only pleasantly but also with pleasant permanent results.

The "Blue Art" is a very simple chemical process by which line drawings and outlines of proper objects may be transferred upon a background of brilliant blue in lines of dazzling white; and so inexpensive is it, as well as simple, that these exquisite pictures in blue-and-white may be among the decorations of the plainest home; and certainly their preparation affords a delightful home pastime for the household. We may also add that this process is considered so valuable a discovery that the honor of it affords ground for contention between French and American journals, the contestants being a Philadelphia chemist and *Le Génie Civil*, a Paris publication.

In the first place dissolve one and one quarter ounces of red prussiate of potash, together with one and seven eighths ounces citrate of iron and ammonia, in sixteen ounces of pure water; a rich golden yellow solution will result, which is to be applied by means of a cloth brush in a darkened room, upon a fair quality of well-sized, untinted paper; this solution will produce about one hundred large sheets very sensitive to the action of light.

The next thing is to procure a suitable frame, although for simple experiments a sheet of glass held against the window will suffice. But it will be more convenient to have a frame of strips of pine an inch and a half wide and three quarters of an inch thick, joined solidly at the corners, rebated to hold glass and back-board, and large enough for a good-sized engraving, the back being firmly held in place by two pivot sticks slipped into grooves.

Now take the article you wish to copy — a fern leaf, a spray of grass, a lace pattern, or a drawing on thin paper — place it face down upon the glass and cover it with the sensitive paper, which of course you have carefully prepared in a dark room. In the strong sunlight a rapid and curious succession of colors will be observed in the yellow sheets; the glistening saffron turns to a tawny hue, then a light green follows, to be succeeded by a sickly blue, which gradually passes into a grayish purple; *at this stage* the frame should be removed from the light, and the sensitive sheet given a bath in pure cold water. The time of exposure should be about four minutes, although by careful timing any shade may be elicited, from the soft "baby blue" — about two minutes — to the deep ultramarine — about six. This timing is, of course, intended for the direct and powerful rays of the sun; the exact period may be tested by leaving a bit of the sensitive paper projecting from under the glass. The process of coloration can thus be accurately gauged.

After the paper has been removed from the frame and thrown into the bath, replace immediately by another if several copies are desired, so that the exposure of the second may be in progress while the first is being washed and fixed. The water dissolves out any excess of the chemicals used in the preparation of the paper, and after several washings with clear water the print loses its sensitiveness and becomes permanent.

The philosophy of the process is very evident; the opaque filaments of the grass, or the black lines of the drawing, refuse the direct passage of the light, while the open spaces suffer the chemical operation, the bath in clear water removes the residue of the sensitive wash, revealing the clear white outlines on the blue background.

Engravings also may be copied in the blue and white tones with satisfactory results. Almost every home has a number of unframed engravings, etchings or prints, stored away and almost forgotten; select from among these the ones with the most delicate lines, and the deepest shading, and blue copies may be made from them wholly worthy of a place on the chamber or nursery walls. If the engraving or print is on paper too thick for the passage of light, saturate a white linen rag with kerosene oil, and carefully rub the reverse side until the lines show through; the thickest paper, short of card or bristol board, in this way can be made susceptible to the process, the oil rendering it sufficiently translucent; nor is the print at all damaged by the operation, as the oil will entirely evaporate in a day or two.

A very pretty and artistic way to preserve these prints, after a sufficient number have been copied, say fifty, is to bind them together with ribbon, placing a stout strip of cardboard at front and back for the ribbon to pass through. Engross on

tracing cloth, or thin paper, a suitable title, such as —

"THE BLUE PRINT ALBUM.

BY M — L —."

Then copy this in blue on a piece of bristol board, and with a similar piece for the back you have a pretty cover.

By carefully timing and equalizing the exposure, the shade of blue may be preserved the same throughout the whole set; but if an odd and striking effect is desired, vary the shades by varying the "timing." Borrow, if possible, the negative of your own photograph, to use as a vignette, or for the frontispiece of your album; subject it to the same process of exposure and wash, and the result will surprise you — a soft blue and white background with the face as strongly defined as you may decide in timing it; it presents a far more striking effect as a vignette or frontispiece, and is more in keeping with your volume than the black and white of the photograph. Trim the leaves neatly, and paint the edges with gold bronze. If you choose, you can bind in with each drawing a neatly penned description or a fanciful story suggested by the picture — this may also be copied in blue — and there you behold yourself the author of

a volume that, depend upon it, if neatly done will be a household treasure.

And what will all this cost, above the value of your own time? Briefly this: for citrate of iron and ammonia, twenty-five cents, the same sum for red prussiate of potash, fifty cents for paper, seventy-five cents for a cloth brush with which to apply the solution, for the glass and frame about a dollar and a quarter — three dollars all told, and cheap enough, for the many pleasant and useful results that you may contrive from it.

A few suggestions occur to me here which may be helpful to some of you: in printing imperfect lines often result, but soda will destroy the blue, and if any indistinct or blurred line be traced on with it, it will become perfectly white and distinct; it is also advantageous, after several washings with water, to pass over the wet surface a weak solution of chlorine or of hydrochloric acid — three parts of acid to one hundred of water; this will give greater brilliancy to the blue tint, but it is not a necessity; the print after the washing should always be hung up to dry, or placed between two sheets of blotting paper; and in closing I would emphasize the fact that the prepared sensitive sheets should be kept hung up in a dark dry room, to preserve them from the dampness and light. Treated thus they will retain their sensitiveness for an indefinite time.

WHAT TO DO ABOUT IT.

JUNIOR. 1. "When there are little jobs, such as putting on a caster to a chair, should I be expected to do it for nothing? I contend not, but the rest of the family, yes."

This is a delicate question to be called as referee in, but on grave consideration the W. B. decides that the boy who does odd jobs and repairs about house cannot be expected to do them for nothing, and is to be paid even for putting a caster on an easy chair. In turn of course he expects to pay for the steady jobs and repairs that have to be put on him, with a trifle allowance for back pay, on the ten or a dozen years when his exclusive part in life was to make work for other people. Junior had better ask for a statement of account between himself and his parents, find what they pay out for him in a year, and credit his jobs against it.

2. "Do you know what allowance most boys of seventeen receive? If so, please tell me the average." Depends first on the family income, and second on the boy's ability to make a good use of his money. I know a good many rich fathers

who happen to be sensible ones too consider that their sons are amply provided with spending money on ten dollars a month, their clothes, board and school bills being outside of this. From this fund they are expected to pay car and ferry fares, tickets to amusements, odd lunches, books, and any instruments which take their fancy, such as a camera, a microscope, or a lathe. Also from this money they must pay all damages from their own carelessness or mischief. All club and society dues come out of this sum. Any larger expense, like a canoe, a bicycle, or a camping tour, is arranged by the father and depends on the boy's good conduct. This allowance is considered ample by the best fathers, having from five thousand to twenty thousand dollars yearly income, and they say that boys seldom give good account of more. Of course many boys have much more to spend, but it is thoroughly wasted, and damages the spender, invites hangers-on of the poorest character, and unfits a boy for a successful business life.

THE WISE BLACKBIRD.